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Thesis

**OUR FINAL VOYAGE:
THE TITANIC AND THE ARK AS MODELS
FOR ENVIRONMENTAL SURVIVAL**

BY

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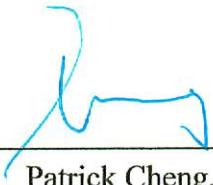
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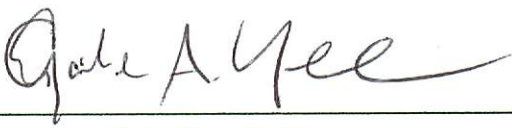
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**Our Final Voyage:
From the Titanic to the Ark as Models for Environmental Survival**

by

Susan Spilecki, MFA

Abstract: This master's thesis will offer two models to examine worldviews for human survival: the Titanic and the Ark. I conclude that the Ark represents the preferable worldview from an ecological perspective and argue that it is the basis for a more egalitarian view of laity in the church. I also suggest similar such studies as the basis for lay-led Christian formation activities centered on Creation care.

This thesis is dedicated

to the memory of John Fenton,
my paternal grandmother's uncle,
who had planned to stow away on the *Titanic*,
but who, due to an altercation with English policemen,
missed the boat
and thereby sidestepped a terrible destiny;

and

to all of us on Earth, human and nonhuman,
that we may share the same
good fortune.

*Bottom line is, even if you see them coming,
you're not ready for the big moments.
No one asks for their life to change, not really.
But it does.*

*So what are we, helpless? Puppets?
No. The big moments are going to come.
You can't help that.*

*It's what you do afterwards that counts.
That's when you find out who you are.*

You'll see what I mean.

--Joss Whedon

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And the world will be better for this... -- Mitch Leigh

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Chapter 1: Modeling the World's Survival with Voyages

They that go down to the sea in ships, that do business in great waters; These see the works of the LORD, and his wonders in the deep. For he commandeth, and raiseth the stormy wind, which lifteth up the waves thereof. They mount up to the heaven, they go down again to the depths: their soul is melted because of trouble. They reel to and fro, and stagger like a drunken man, and are at their wits' end. -- Psalm 107:23-7

Over the last 200 years, mass industrial society has triggered changes in the global climate that will take decades to mitigate where mitigation is even possible. Economists advise moving to more sustainable forms of growth or development, but the definitions of the words “sustainable,” “growth,” and “development” are all still widely debated by different stakeholders with their own agendas; governments, corporations, political parties, and environmentalists clash not just on policies of mitigation and adaptation but also on the words we might best use to speak about such things. All this leaves ordinary citizens struggling to make sense of how this catastrophe came about and what we can do at this late date to mitigate its worst effects. This struggle requires not only an understanding of the mechanisms of climate change—how greenhouse gases trap the sun’s rays, warming the Earth, melting glaciers, raising sea levels and increasing the frequency and destructiveness of extreme weather events. It also requires “social and institutional analysis that...show both how to examine high carbon societies and also what would need to happen for shifting to low carbon societies.”¹

Our baptismal vows include resisting evil, repenting of sin, striving “for justice and peace among all people, and respect[ing] the dignity of every human being,”² so such social and institutional analysis is a theological project. Sallie McFague argues, “North

¹ John Urry, *Climate Change and Society* (Cambridge: Polity Press, 2011), 13.

² *Book of Common Prayer* 304-5.

American theology should be about economics and politics, consumerism and its alternatives, global warming and diversity, but *as they* contribute or diminish to giving glory to God by loving the world.”³ I believe North American Christians need to do this theology for themselves, not wait for it to be done by ecclesiastical “authorities.” For the Christian laity, who live in the material world and come together due to a shared faith in their Creator, Redeemer, and Sustainer, the environmental crisis is an opportunity to take up baptismal power and authority. My experience with RENEW in the Roman Catholic Church of the 1980s was empowering; groups of laypeople met in each other’s homes for Bible study. The environmental crisis, as a global catastrophe with deep theological reverberations, offers the content for similar such local small Christian formation groups.

This thesis examines one kind of social and institutional study that might be used in this context. McFague recommends that we begin by reflecting on two worldviews: the mechanistic and the organic. I agree that worldview is a crucial beginning point for teaching the faithful theological analysis in the context of the environment. I present models of the two worldviews that McFague considers, and I have chosen my models to capture people’s imaginations and motivate them to do social analysis that will enable them to create new visions of future flourishing on Earth.

Joseph Campbell offers the journey of a single hero fighting obstacles as the symbolic story common to all cultures. Yet this symbol has participated in the romantic Western individualism and framing of life in militarized terms that have played a major role in bringing Earth to our current crisis, so it is inappropriate for my purposes. Instead, I propose the archetype of the voyage, by definition a communal venture. For my models,

³ Sallie McFague, *Life Abundant* (Minneapolis: Fortress Press, 20ZZ), 39.

I offer, for the present situation, the voyage of the *Titanic*, and for a vision of a different future, the voyage of the Ark. Both will be tested for their ability to serve as models of what the world is and could be and as models that can help us survive in the world as it is rapidly changing around us.

McFague writes, “[S]ince no metaphor or model refers... directly to God, many are necessary. ...[S]ome... aspects of the God-world relationship are illuminated by this or that model in a fashion relevant to a particular time and place.”⁴ Institutionalized forms of oppression—racism, sexism, classism, speciesism,⁵ etc.— support anti-environmental agendas. But as James Cone notes,⁶ it isn’t easy to foster cooperation between oppressed communities who understand the structures of oppression and environmentalists who are immersed in white, middle-class privilege. The causes of the crisis we have inherited are complex and hard to see. We need to expose how intertwining systems of oppression have undermined the flourishing of humanity and of all life on our planet. Then we need to reconstruct our modes of living. Because human imagination and behavior are both closely related and resistant to change, we need first to change our ways of seeing the world and then to live toward this vision of wholeness.

I hope this thesis will serve as a step in this direction. It is organized as follows.

Chapter 2 proposes the *Titanic*, with its context, goal, physical and social organization, and the roles played by nonhuman nature as a model for our current socio-environmental situation. The *Titanic* embodied a classist division of humanity, an anthropocentric alienation from nature, and a technocratic reductionism that are all

⁴ Sallie McFague, *Models of God* (Philadelphia: Fortress Press, 1987), 38-39.

⁵ Lisa Kemmerer, ed., *Sister Species: Women, Animals, and Social Justice* (Urbana: University of Illinois Press, 2011).

⁶ James Cone, “Whose Earth Is It, Anyway?” in *Earth Habitat*, ed. Dieter Hessel and Larry Rasmussen (Minneapolis: Fortress, 2001), 23-32.

deeply idolatrous. I show how the *Titanic* is a faulty model of environmental survival, and how, due to its mythic place in our culture, it is also a useful cautionary tale likely to engage the imaginations of the faithful in a renewed Christian formation for an age of environmental crisis.

In Chapter 3, I use the ancient story of humans and nonhumans voyaging together on the Ark to create a new model of the world toward which we need to move. The Ark embodied mutual coexistence, interrelationship, and humility before the Creator and creation. While this model is still imperfect, it has clear advantages over the mode of the *Titanic*. Two extra-biblical resources I use to build this model are Jewish midrash and the 1925 German children's book, *Die Geschichte der Arche Noah (The Story of Noah's Ark)*, with its insightful illustrations by E.B. Smith. I also critique the Ark as a model of environmental survival.

Chapter 4 offers conclusions and suggests future directions for a “mutual formation” form of study groups to engage Christians in institutional analysis and ethical investigation of our world as it is and as we would like it to be.

Chapter 2: The *Titanic* as a Faulty Model of Environmental Survival

*People possess four things
that are not good at sea:
rudder, anchor, oars
and the fear of going down. -- Antonio Machado*

Though it sailed one hundred years ago, the RMS *Titanic* is a fitting model of the worldviews that support modernity as it faces environmental disaster. In this chapter, I describe the *Titanic*, from its context, construction, physical and social organization, and the roles played by nonhuman nature, to its mission and its ill-fated voyage. I show how all these elements add up to a complex of mechanistic progressivism and anthropocentric denial of the interrelationships necessary for environmental survival, which is clearly idolatrous. Then, I show how, in its unrealistic mapping of reality, the worldview illustrated by the model of the *Titanic* acts in our society today much like the faulty mental models that keep people from surviving disasters.

2.1 The Story of the *Titanic*

2.1.1 Context

In 1912, the world was enjoying vast and rapid changes in technology and society. In the preceding century, “[m]ankind’s rate of travel overland had more than trebled, while at sea it had more than quadrupled,” enabling ships to cross the Atlantic Ocean in less than a week. The previous decade saw “the introduction of the phonograph, wireless telegraphy, turbine-powered steamships, the electric light, . . . heavier-than-air flying machines, motion pictures—all of them reliable apparatus rather than mere technical novelties.”⁷ The discoveries of Marie Curie and Einstein, and the theories of

⁷ Daniel Allen Butler, *“Unsinkable”: The Full Story of the RMS Titanic* (Mechanicsburg, PA: Stackpole Books, 1998), 25-6.

Freud, Jung, and Pavlov entered the conversation of the day and changed social relations while supporting a more secularized social fabric. Tensions between the classes rose. “Just over one percent of the population of Great Britain controlled 67 percent of the nation’s money, a proportion that held equally true for the United States.”⁸

2.1.2 Construction

The *Titanic* itself was, first of all, a manmade technological construction, the product of an immense amount of natural resources, especially the iron ore stripped from the earth and forged into steel. It was the product of skilled human labor and the source of a great deal of employment, from the dozen designers and master shipbuilders to the 3,000 men who “swarmed over her growing shape as her shell plating was gradually laid over her frame and her internal structure was completed.”⁹ The ship was true to its name: 882.5 feet long and 93 feet wide, with a displacement of 45,000 tons and a top speed of 24 knots. It was not the fastest ocean liner, but it still required 3.25 minutes and 3,000 feet to come to a full stop.¹⁰ The White Star Line chose to spend money on opulence rather than speed. The first-class smoking room exemplified this opulence. “A carefully orchestrated assembly of carved mahogany-paneled walls, inset with leaded glass panels and etched-patterned mirrors, enclosed the handsomely linoleumed floor, on which sat massive leather-covered armchairs beside lovingly carved, marble-topped tables.”¹¹

2.1.3 Physical and Social Organization

On its maiden voyage in April 1912, the *Titanic* accommodated slightly more than half the passengers it was designed to carry. In first class, 337 passengers occupied

⁸ Butler 26.

⁹ Butler 11-12.

¹⁰ Butler 237, 21.

¹¹ Butler 18.

suites that cost \$4,350 for a one-way passage, the equivalent of over \$80,000 in 1997 dollars. The six decks of second class, while less grand, were comparable to first class on any other North Atlantic liner; the 271 second-class passengers shared the four-star galley with first class.¹² The 712 third-class passengers enjoyed quarters that were “spacious, spotless, and...a bit austere,” and food that was good and plentiful, particularly compared to food back home in the more impoverished areas, such as Ireland.¹³

In its structure, the *Titanic* embodied the values of modern first-world life. It was a floating city, where people of different economic backgrounds were thrown together and separated, stratified, literally, by “class.” First-class passengers included more than a dozen whose net worth exceeded £300 million, and who were treated accordingly.¹⁴ In contrast, the steerage decks complied with a “requirement of American law... that locked barricades be set up between steerage and the other passengers,”¹⁵ to prevent the spread of infectious diseases immigrants were thought to bring with them.

2.1.4 Nonhuman Nature

The passengers and crew were also alienated from nature. The nonhuman animals onboard came in the form of 75,000 lbs. of fresh meat, 25,000 lbs. of poultry and game, 15,000 lbs. of fish, and 10,000 lbs. of bacon, ham and sausages, as well as 40,000 fresh eggs.¹⁶ Inside the ship was human culture: lending library, gymnasium, smoking room, Turkish baths, and a squash court.¹⁷ Outside was the North Atlantic Ocean, not a habitat or agent capable of action, but a path to cross from Southampton, England to New York.

¹² Butler 19

¹³ Butler 20

¹⁴ Butler 27.

¹⁵ Butler 40.

¹⁶ Butler 36.

¹⁷ Butler 18.

The *Titanic*'s reliance on nature could only be seen in the 162 coal furnaces in which 650 tons of coal burned per day to maintain top speed.¹⁸ The voyage was nearly postponed due to a coal strike. Welsh coal miners were protesting horrid working conditions, so coal was scarce and expensive. To keep on schedule, the White Star Line took coal from the *Oceanic* and the *Adriatic*,¹⁹ which had been scheduled to sail the following week.

2.1.5 Mission

The *Titanic*'s mission is also representative. From its inception as the largest, most luxurious ship of the White Star Line, the *Titanic* was meant to be as much a symbol as a vehicle for profit. J. Bruce Ismay, director of the White Star Line, and Lord William Pirrie, chairman of the Harland and Wolff shipyard, imagined the *Titanic* as a response to the Cunard Line's new superliners, the *Lusitania* and the *Mauretania*. Cunard had built these ships with help from the British government in the form of "sizable annual operating subsidies, low-interest loans, and Admiralty assistance"²⁰ in their design. It is significant that the technological assistance that enabled these ships to be the fastest in the world came from the Admiralty's experience building ships for the British Navy to fight the British Empire's wars and protect its colonies. Since they could not beat Cunard in speed without such technological help, Ismay and Pirrie opted to beat them in size and luxury instead. With the *Oceanic*, *Adriatic*, and *Titanic*, White Star envisioned offering "weekly sailing east- and west-bound and [maintaining] a cargo and passenger capacity that would nearly double that of the two Cunard ships."²¹ Had the *Titanic* not sunk, this business model could have generated enormous profits.

¹⁸ Butler 17, 237.

¹⁹ Butler 37.

²⁰ Butler 9.

²¹ Butler 10.

The passengers of different classes had different goals for embarking on the *Titanic*. In an age that valued amassing enormous amounts of wealth and showing it off through conspicuous consumption, the first-class passengers were simply traveling in their accustomed style. The third-class, steerage, passengers, were in a different situation:

Many were Germans, whose Fatherland was undergoing a rapid transformation from an agrarian society to an industrial juggernaut, with all the attendant social dislocations; many others were Britons, often skilled or semiskilled workers, forced to seek employment in America as Britain began her slow decline industrially and economically. To these people a ship was transportation...²²

For the 892 crewmembers, the ship was simply a workplace, albeit an extraordinary one.

2.1.6 Voyage

On April 10, 1912, the *Titanic* began its maiden voyage. As tugboats pulled it from the Southampton quay to the River Test, it passed the *New York* and *Oceanic*. “The suction of her wake drew the two smaller vessels away from the dock.... [T]he *New York* was pulled helplessly toward the *Titanic*.”²³ Captain Smith stopped engines. Tugs pulled the *New York* away. This incident disturbed some passengers. One said, “That was a bad omen. Get off this ship at Cherbourg, if we get that far. That’s what I’m going to do.”²⁴

Beyond the passengers, the crew, and the ship itself, perhaps the most important actor in the *Titanic* drama was the iceberg, and one of the most repeated questions is why the ship hit it when it had so many warnings of the southward-drifting ice fields.

In addition to the *Caronia*’s warning, there were warnings sent by the *Noordam* and the *Amerika*, which had been sent to the bridge, although no one seemed to know exactly what happened to them. There was also a message sent by the *Baltic* still sitting uselessly in Bruce Ismay’s jacket pocket. And,

²² Butler 19.

²³ Butler 41.

²⁴ Quoted in Butler 42.

unknown to anyone on the bridge, yet another message had arrived...from the...*Mesaba*.²⁵

The *Mesaba*'s message detailed the latitude and longitude of large icebergs and field ice. "The *Titanic* was already inside the rectangle described in the *Mesaba*'s message, and had Captain Smith known this he might have considered changing course or reducing speed."²⁶ This message was still in the telegrapher's office, unheeded like the other four. Making the situation more difficult was the clear weather, "since the chop a breeze usually kicked up would make it easier to spot any ice ahead as it washed up against the base of a berg or a growler."²⁷ Worse yet, there were no binoculars in the crow's nest.

All these conditions converged at 11:40 pm on April 14, 1912 when the lookouts suddenly saw an iceberg directly ahead. First Officer Murdoch ordered the ship turned hard starboard. At the last second, the berg brushed past, casting chunks of ice on the deck. There was "a faint, metallic ripping sound."²⁸ Immediately, Murdoch shut the watertight doors to the engine and boiler rooms as a precaution. It was unclear whether the ship had been struck. Over the next two hours, recognition of the ship's peril was gradual and erratic, occurring first among crew and only later among passengers. Steward Johnson thought the sound was that of a dropped propeller blade.²⁹ The passenger Major Peuchen thought a wave had hit the ship.³⁰ The commutator showed the ship to be "listing five degrees to starboard and two degrees down by the head,"³¹ which told Captain Smith that the ship was seriously damaged. His inspection showed "the forward

²⁵ Butler 63.

²⁶ Butler 63-4.

²⁷ Butler 64. A growler is a large chunk of ice that comes off an iceberg.

²⁸ Butler 67.

²⁹ Butler 67.

³⁰ Butler 69-70.

³¹ Butler 71.

cargo holds flooded, the mailroom awash, and the squash court floor covered with water.... Boiler Room No. 6 was flooded to a depth of fourteen feet...”³²

And all of this had taken only ten seconds.

If this danger came as a shock to passengers for whom sea travel was a rare experience, for Captain Smith, who had been at sea for forty years without mishap, the accident was enervating. In 1906, he told reporters about the *Adriatic*, “I cannot conceive of any disaster causing this ship to founder. Modern shipbuilding has gone beyond that.”³³ Worse still for Smith and Ismay was the knowledge that the ship carried 2,207 passengers and crew, but lifeboats for only 1,178. British Board of Trade regulations did not consider new shipbuilding technologies, and required the number of lifeboats based on the tonnage of a ship rather than the number of its passengers. In 1910, “Ismay had been presented with a plan to equip the ships with as many as forty-eight lifeboats, with a total capacity of 2,886 persons.... Ismay studied the plan for a few minutes, then rejected it on grounds of expense.... He then returned to questions about the ship’s décor.”³⁴

The disparity between what the crew and passengers understood about the situation was stark. The crew was frenziedly attempting to prevent the icy waters from reaching the fiery coals and exploding. Boiler Rooms No. 5 and 6 were abandoned and shut tight. Their crews went to Deck E to help draw fires from the boilers and pump the water out in Boiler Room No. 4.³⁵ The two telegraphers took turns tapping out the distress call, the *Titanic*’s call letters and its position, over and over. In contrast, the passengers did not know how to interpret the sounds and sensations on the ship. For

³² Butler 71.

³³ Quoted in Butler 72.

³⁴ Butler 93-4.

³⁵ Butler 81.

most, “it was only when the Titanic’s engines stopped that [they] noticed anything amiss.”³⁶ Others noticed when the ship’s listing made using stairways difficult.³⁷ They asked for explanations. Many of the crew frankly lied to avoid panic, saying the ship had burst pipes when they knew that the reality was much worse.³⁸ Few passengers felt alarm. Some “playfully threw chunks of ice...at each other.”³⁹ Passengers in third class learned the truth sooner than others; being [roomed] lower down in the ship, they heard the crash better than those above. They were close enough to the engine rooms to investigate, see the water, and try to find their way topside.⁴⁰ Passengers on other levels reminded each other of the unsinkability of the Titanic.⁴¹ Officers encouraged the passengers to put on lifebelts and meet on deck, but they were met with complaints and hesitation; some were ignored. Even officers had an unequal understanding of the situation: the Countess of Rothes was told by one steward to get her lifebelt and go to Deck A, and by another that such actions were unnecessary.⁴² Even when the peril was recognized, confusion and disbelief reigned. Second Officer Lightoller had to get Captain Smith to explicitly order the officers to load the lifeboats and lower them to the sea. The passengers hesitated to leave the warmth of the enclosed part of Deck A and enter the freezing air to get into the boats. The newly painted pulleys and falls were sticky and erratic, making people think more safety might lie on the ship than in the boats.⁴³

³⁶ Butler 89.

³⁷ Butler 82.

³⁸ Butler 76-7, 81-2.

³⁹ Butler 78.

⁴⁰ Butler 79-80.

⁴¹ Butler 80, 82.

⁴² Butler 84.

⁴³ Butler 93.

Around 12:30, when word came to start loading third class women and children into the lifeboats, Steward Hart realized that the extra bulkheads required by law to impede the spread of disease would actually impede the steerage passengers from finding their way topside, so he made several trips all the way down into the labyrinthine passageways and led groups of women and children up. There was “no deliberate policy of discrimination against Third Class. ...[S]imply no policy or procedure for looking after the Third Class passengers existed.”⁴⁴ In the end, out of 712 steerage passengers, only 177 were saved: 75 men, 76, women, and 26 children.⁴⁵

The story of the *Titanic* is notable not only for the size of the ship and of the mistakes that were made, but also for the ways those aboard met their hour of trial. “Some things... never change. Courage, selflessness, meeting death with dignity are immutable. So are cowardice, arrogance and stupidity. These qualities were all present in those aboard the *Titanic* the night she sank.”⁴⁶ People’s responses to crises depend on many things, from personality to professional training, from a strong grasp of social customs to a strong grasp on life. However, social convention is rigid. Our actions are what brand us cowards or heroes; but the extent to which social forgiveness is proffered depends also on culpability. So, on one hand, we have those who had no responsibility for the disaster, such as eighteen-year-old Daniel Buckley and ten-year-old Billy Carter, who sneaked onto lifeboats wearing shawls over their heads to pass as women,⁴⁷ and Benjamin Guggenheim, who laid aside his lifebelt, donned his white tie and tails, and in a fit of *noblesse oblige* declared, “We’ve dressed in our best and are prepared to go down

⁴⁴ Butler 105.

⁴⁵ Butler 238-9. Numbers are approximate, being based on the published passenger list, which did not include later cancellations or passengers traveling under assumed names.

⁴⁶ Butler xii.

⁴⁷ Butler 121, 128.

like gentlemen.”⁴⁸ Neither boy suffered public humiliation, and Guggenheim was lionized. Also noted were the men in the engine room who, though released from their duties, remained at their posts trying to keep the power going for the lights and the telegraph. They too went down with the ship.⁴⁹

In contrast, two passengers who had some responsibility were Bruce Ismay, director of the White Star Line, and Thomas Andrews, director of Harland and Wolff, and the master shipbuilder who oversaw the building of the *Titanic*. Their contrasting choices would be loudly noted in days to come. Ismay, after helping load woman and children onto many lifeboats, suddenly “jumped into an empty spot near the bow” of a boat that was being lowered.⁵⁰ Andrews, in contrast, was last seen standing in the first class lounge, staring fixedly at a painting. After the sinking, many suggested that Ismay should have gone down with the ship, and that his failure to do so was “cowardly...and brutal.”⁵¹ Hounded out of White Star, Ismay died a recluse twenty years later.

For those who made it to lifeboats the difficulties were far from over. On Boat 6, Quartermaster Hitchens ordered the others to row away from the ship and refused the women’s insistence that they try to pick up those struggling in the water. By the time Molly Brown threatened to throw him overboard, the cries for help had stopped. Brown took the tiller and arranged for the women to take turns rowing to keep warm.⁵² Back on the *Titanic*, as crew fought to release more lifeboats, Collapsible B fell to the Boat Deck upside down. Being two tons, it was impossible to overturn. When the ship began to sink, waves washed it into the water, still upside-down. Dozens of men swam to it and climbed

⁴⁸ Butler 104, 123.

⁴⁹ Butler 131.

⁵⁰ Butler 126.

⁵¹ Butler 182.

⁵² Butler 147-8.

on. They stood there, watching the *Titanic* disappear into the sea and then said the Lord's Prayer together. For the next two hours the men fought to stay awake and stay standing on the boat's keel. Many, including telegrapher Jack Phillips, froze to death and slid off into the sea. Not long before the *Carpathia* picked up the survivors, Boats 4 and 12 picked up the thirty men who had managed to stay alive soaking wet in the freezing air.⁵³

2.2 The Titanic as a Faulty Model for Environmental Survival

The worldview modeled by the *Titanic*, originating as it does in technological progress and an acceptance of inequality among humans and between humans and nonhuman nature, illustrates a misplacement of value so profound as to be idolatrous. Yet the great thinkers of the modern era who began the kind of thinking that led to this worldview were in fact themselves just trying to understand the world in more and better detail. That their yearning for knowledge degenerated over the centuries to ways of thinking and being that have led to great damage in the world is as tragic as it is ironic.

Physicist Fritjof Capra argues that “high inflation and unemployment,...an energy crisis, a crisis in health care, pollution and other environmental disasters, a rising wave of violence and crime, and so on.... are all different facets of... the same crisis,... a crisis of perception.”⁵⁴ He claims this crisis comes from “trying to apply the concepts of an outdated worldview—the mechanistic world view of Cartesian-Newtonian science—to a reality that can no longer be understood in terms of these concepts.”⁵⁵ Applying an old perception to a new situation or changed environment is a common human behavior that often leads to tragedy. In this section, I show how the worldview illustrated by the model

⁵³ Butler 131, 142, 148-9, 154.

⁵⁴ Fritjof Capra, *The Turning Point* (New York: Bantam, 1982), 15.

⁵⁵ Capra 15-6.

of the *Titanic* acts in our society today much like the faulty mental models that keep people from surviving disasters.

Laurence Gonzales studies how people succeed or fail at surviving extreme crisis situations. He describes mental models as a “strategy the brain uses for handling complicated problems”; mental models are “stripped-down schematics of the world [which]... may tell you the rules by which an environment behaves or the color and shape of a familiar object.”⁵⁶ He compares our use of mental models to the adaptation of the immune system, which identifies materials in its environment as harmful or harmless. “A lifetime of experience builds the system, but a subtle change in the environment can mean that the system no longer has the correct response.”⁵⁷ Similarly, humans react to their environments based on experience; however, “[y]ou need to know if your particular experience has produced the sort of adaptation that will contribute to survival... And when the environment changes, you have to be aware that your own experience might be inappropriate.”⁵⁸ In life-or-death situations, people who cannot change their mental models to match the new situation fail to survive. Similarly, the Cartesian, mechanistic worldview that has so absorbed the modern world has become a threat to human survival.

In his attempt to revolutionize thought, René Descartes created the rigorous discipline now known as the scientific method. “Twentieth-century physics has shown us very forcefully that there is no absolute truth in science, that all our concepts and theories are limited and approximate.”⁵⁹ However, over the centuries, Descartes’ method became,

⁵⁶ Laurence Gonzales, *Deep Survival* (New York: W.W. Norton, 2003), 69.

⁵⁷ Gonzales, *Deep*, 59.

⁵⁸ Gonzales, *Deep*, 113.

⁵⁹ Capra 57.

at least in the West, “the only valid way of understanding the universe.”⁶⁰ While Capra admits that Descartes’ analytical approach was an immense contribution to science, he notes that “overemphasis on the Cartesian method has led to...the widespread attitude of reductionism in science—the belief that all aspects of complex phenomena can be understood by reducing them to their constituent parts.”⁶¹ Such reductionism can lead to a sort of machine-ism, as when Descartes wrote, “I do not recognize any difference between the machines made by craftsmen and the various bodies that nature alone composes.”⁶² The corollary of this view is that the parts are replaceable; “moreover, reality is not alive, and therefore we have no responsibility toward it—we can use and discard it when worn out.”⁶³ But everything is not replaceable; when a person dies or a species is forced into extinction, nothing can take its place.

Further, our culture believes in and values the ideas of economic growth and progress. “In both its Marxist and its capitalist expressions, modernity assumed that the redemptive factor was inherent in the historical process as such—that progress for all was inevitable.”⁶⁴ Adam Smith, who described the process of economic growth, foresaw the problems we face today. “Smith himself predicted that economic progress would eventually come to an end when the wealth of nations had been pushed to the natural limits of soil and climate.”⁶⁵ Extraordinary gains can have extraordinary costs. Increased standards of living come in part from manufactured products that make life easier, which themselves come from the exploitation of the environment, the violent extraction and

⁶⁰ Capra 58.

⁶¹ Capra 59.

⁶² Quoted in Capra 61.

⁶³ McFague, *Life Abundant*, 42.

⁶⁴ Joanna Adams, “Hope as the Intractable Resolve of the Spirit” in *Hope for the World: Mission in Global Context*, Ed. Walter Brueggeman (Louisville: Westminster John Knox, 2010), 17.

⁶⁵ Capra 201

polluting practices of mass industrial production. Increases in nutrition, sanitation, and health lead to higher life expectancy and to large increases in human population, which lead to more demand on the earth's capacity to provide food, water, and mass-produced products. We are reaching the limits of the Earth's carrying capacity; environmental scientists warn that the damage done by mass industrial society is creating major changes in the global climate that will have catastrophic consequences.

Some people ignore the danger of climate change because they assume "we" will come up with new technology to mitigate or reverse it. This is in tune with the mechanistic worldview; if the world is a machine, then fixing the parts should fix the whole. "Individuals and institutions...have come to believe that every problem has a technological solution."⁶⁶ Technology is assumed to be perfectable, as seen with Captain Smith's unwarranted faith in twentieth-century shipbuilding.

Underlying the technocratic mass industrial system, particularly in the West, is a deep-seated individualistic consumerism that reinforces unrealistic behavior at all levels. In 1900, Andrew Carnegie published *The Gospel of Wealth*, in which he wrote that the capitalist economy "is founded upon the present most intense Individualism... Under its sway we shall have an ideal State, in which the surplus wealth of the few will become in the best sense, the property of the many, because administered for the common good..."⁶⁷ Carnegie's philosophy, shared by many of the very wealthy then and now, is founded on Social Darwinism, which teaches that individuals who achieve success must be superior, since the fittest survive the social struggle.⁶⁸ This ignores the part played by other social institutions, such as racism and sexism, and their legal and material counterparts, which,

⁶⁶ Capra 218.

⁶⁷ Quoted in Rebecca Todd Peters, *In Search of the Good Life* (New York: Continuum, 2004), 60.

⁶⁸ Thomas F. Gossett, *Race: The History of an Idea in America* (New York: Schocken Books, 1963), 145.

like the extra bulkheads in the steerage section of the *Titanic*, can seriously impede the success and even survival of individuals who are assumed to be free and equal in the economic struggle. Yet such “[i]ndividualism remains a core value for people who follow the big business model of globalization because it affirms and reinforces their vision of how capitalism works.”⁶⁹ As Gonzales points out, “Past experiences that reward our behavior (or simply fail to punish it) make our scripts and models feel reliable.”⁷⁰ But as the climate crisis shows, some problems are simply too immense to be solved by individuals working alone, however free and rational they perceive themselves to be.

Lastly, the human assumption that nonhuman nature is merely a stage for human activity, a warehouse of raw materials with which to build “civilization” (i.e., not-nature), is based on radical anthropocentrism that also shows itself to be a faulty view of reality. “The selfish anthropocentric focus on human beings as the principle concern in social, environmental, and economic decision-making is simply untenable.”⁷¹ Life on earth would go on quite well without humans, but would collapse utterly without microbes.⁷²

All of these elements of the anthropocentric, mechanistic worldview are inherently idolatrous. In Andrew Linzey and Dan Cohn-Sherbok’s book, *After Noah: Animals and the Liberation of Theology*, they say, “By ‘idolatry’ we mean the attempt to deify the human species by regarding the interests of human beings as the sole, main or even exclusive concern of God the Creator.”⁷³ But this definition only holds for people who give the matter any thought. I think that, very often, even people of faith frequently

⁶⁹ Peters 60.

⁷⁰ Laurence Gonzales, *Everyday Survival*, (New York: W.W. Norton, 2004), 54.

⁷¹ Peters 26.

⁷² Anne Primavesi, *Sacred Gaia* (London: Routledge, 2000), 17-19.

⁷³ Andrew Linzey and Dan Cohn-Sherbok, *After Noah: Animals and the Liberation of Theology* (London: Mobray, 1997), 118.

forget to keep God in the equation at all. In the busyness of modern, secular life with the material world turned into commodities for our convenience, it is easy to forget that we are not God, and that our own interests should not be our sole, main or even exclusive concern. By setting ourselves up in the place of the Creator we break our relationship with the rest of the created world and dislocate our values from their Source.

Having examined a problematic model of the world as it is, we now turn to a model of the world as it might be if humans could enter into right relation with the Earth.

Chapter 3: The Ark as a Useful Model of Environmental Survival

*There is a tide in the affairs of men.
Which, taken at the flood, leads on to fortune;
Omitted, all the voyage of their life
Is bound in shallows and in miseries.
On such a full sea are we now afloat,
And we must take the current when it serves,
Or lose our ventures. -- Julius Caesar, IV.iii.218–224*

3.1. The Ark as a Model of the World

“What a commission it is to express a future that none think imaginable! Of course this cannot be done by inventing new symbols...Rather, it means to move back into the deepest memories of the community...”⁷⁴ Historians have written countless books examining the voyage of the *Titanic* from the time it was designed to the night it sank. In contrast, theologians for the most part have not made an equivalent examination of the voyage of the Ark, in part because it is not really a voyage in the sense of transportation from one place to another; unlike the *Titanic*, the Ark had no means of propulsion, and Noah and his family had no destination in mind.⁷⁵ However, as children’s book writers and toymakers know, the humans and animals on the Ark did experience a voyage in the sense that they were enclosed together in the ship for at least six weeks. Like the story of the *Titanic*, the story of the Ark can serve as a useful model of the voyage of an imperiled community.

Another reason why theologians have not examined the voyage of the Ark has to do with the biblical text itself. The entire story takes up 85 verses, from Gen. 6:1 to 9:17, yet the actual voyage takes up only 30 verses, none of which tell us about life aboard

⁷⁴ Walter Brueggeman, *The Prophetic Imagination* (Minneapolis: Fortress Press, 2001), 64.

⁷⁵ For the purposes of this thesis, at times I will refer to the story of the Ark as if it happened, and at times as it is portrayed as myth or literature.

ship, with its joys and problems. To fill this lacuna, I draw on two extra-biblical sources. The traditional source is Jewish midrash, the rabbinic interpretations of the biblical texts. While midrash expands for us the meanings of the text, it at heart focuses primarily on the experience of the voyage and its meanings for humans. For a more contemporary form of midrash that goes beyond the human and into the animal realm, I turn to Alice Berend's 1925 *Die Geschichte der Arche Noah (The Story of Noah's Ark)*, with its insightful illustrations by E.B. Smith. I have read many versions of the Ark story in children's books and most tell the tale in the same truncated way the writers of Genesis do. The illustration of the voyage usually shows a tiny distant Ark, often with a giraffe looking out a window at the storm. In contrast, Berend and Smith's book is a work of art. As Dorothy Sayers observed, creative artists can show us theological truths in ways that theologians cannot. "Poets have, indeed, often communicated in their own mode of expression truths identical with the theologians' truths; but just because of the difference in the modes of expression, we often fail to see the identity of the statements."⁷⁶ By complementing the Genesis text with these two forms of interpretation, I will be able to unpack the Ark voyage as a model of the world as it might be, a world marked by interrelationship, mutuality, and the hard work of hope. This is the opposite of the *Titanic* model of technological hubris, and it is the model we need if we are going to survive our ecological crisis.

3.1.1. Reason for the Voyage

The LORD saw that the wickedness of humankind was great in the earth, and that every inclination of the thoughts of their hearts was only evil continually. And the LORD was sorry that he had made humankind on the earth, and it grieved him to his heart. So the

⁷⁶ Dorothy L. Sayers, "The Image of God," in *Letters to a Diminished Church* (W Publishing Group, 2004), 32.

LORD said, “I will blot out from the earth the human beings I have created—people together with animals and creeping things and birds of the air, for I am sorry that I have made them.” (Gen. 6: 5-7)

The most integral way that the story of the Ark is different from that of the *Titanic* is that the builders, passengers and crew of the *Titanic* considered threats like icebergs impossible, whereas the builders and passengers of the Ark would not have embarked if the threat of an iceberg—the Flood—had not already been a given. The *Titanic* had too few lifeboats; the Ark had no lifeboats whatsoever: the Ark *was* the lifeboat. The Genesis text emphasizes God’s justification for destroying almost all humans and animals because of the evil of most humans. The Flood is an act of de-creation. In our own case now it is less true to say that God is sending us climate change to drown us for our sins than to say that God, following the natural laws that God made, is allowing the physical changes we have made in our atmosphere to melt the glaciers and icebergs, stir up more and more violent storms, and raise the level of the sea several feet. The fact that this may drown many of our bioregions, and cause drought in others, is not something God is doing to us and to the animals, but something we have done to ourselves and to the animals.

3.1.2 Building of the Vessel

But Noah found favor in the sight of the LORD. Noah was a righteous man, blameless in his generation; Noah walked with God. And Noah had three sons, Shem, Ham, and Japheth. And God said to Noah, “I have determined to make an end of all flesh, for the earth is filled with violence because of them; now I am going to destroy them along with the earth. Make yourself an ark of cypress wood; make rooms in the ark, and cover it inside and out with pitch. This is how you are to make it: the length of the ark three hundred cubits, its width fifty cubits, and its height thirty cubits. Make a roof for the ark, and finish it to a cubit above; and put the door of the ark in its side; make it with lower, second, and third decks.” (Gen. 6:8-10, 13-16)

The statement about Noah as “a righteous man, blameless in his generation,” is ambiguous. On one hand, “Noah is different from his generation. They are full of evil, of

violence; he is righteous.... The great emphasis on Noah's difference.... justifies his exemption from the universal disaster, and the choice of him to found a new race of Adam."⁷⁷ On the other hand, the text does not say Noah was absolutely blameless, just blameless in comparison to his contemporaries. "Does this damn him with faint praise (only in his corrupt time did he look like a hero)? Or does it praise him for transcending the sociomoral pressures of his period?"⁷⁸ Since, in the Hebrew Bible, God often uses imperfect people to do God's will in the world, either reading can work for us here.

Most children's books about the Ark mention one element of the story that does not come from the biblical text, and that is the response of Noah's neighbors. The ideas of a major flood coming to an arid region, and of building a ship in preparation for such unlikely weather, draw ridicule from Noah's neighbors. However, "Noah did not let himself be shaken by the mockery of the unbelieving"⁷⁹; one might say that he was undeterred by the climate change deniers. "Noah knew that what he had to do was correct, and he did it."⁸⁰ So then we get a picture of four men and four women using hand tools to create an enormous ship in a meadow: a cubit size of eighteen inches would make the Ark a bit more than half the size of the *Titanic*.

Interestingly, in *Die Geschichte der Arche Noah*, Berend doesn't just describe Noah and his family building and tarring the Ark, but also shows them painting it: "Outside, he beautifully painted it. He tried every color in the universe until he decided

⁷⁷ Avivah Gottlieb Zornberg, *The Beginning of Desire: Reflections on Genesis* (New York: Doubleday, 1995), 40.

⁷⁸ Zornberg 41.

⁷⁹ Alice Berend, *Die Geschichte der Arche Noah (The Story of Noah's Ark)*, mit bildern von (illus.) E.B. Smith, (Berlin: Dietrich Reimer (Ernst Bohsen), 1925), 2. All translations are my own.

⁸⁰ Berend 3.

the right mixture.”⁸¹ This detail suggests an element often forgotten in emergency situations: humans need beauty to maintain a healthy relationship with their world.

Frances Moore Lappé argues that “beauty is not a luxury.”⁸² Laurence Gonzales explains why: “Survivors are attuned to the wonder of the world. The appreciation of beauty, the feeling of awe, opens the senses.... This appreciation not only relieves stress and creates strong motivation, but it allows you to take in new information more effectively.”⁸³

3.1.3 Passengers & Stores

“But I will establish my covenant with you; and you shall come into the ark, you, your sons, your wife, and your sons' wives with you. And of every living thing, of all flesh, you shall bring two of every kind into the ark, to keep them alive with you; they shall be male and female. Of the birds according to their kinds, and of the animals according to their kinds, of every creeping thing of the ground according to its kind, two of every kind shall come in to you, to keep them alive. Also take with you every kind of food that is eaten, and store it up; and it shall serve as food for you and for them.” Noah did this; he did all that God commanded him. (Gen. 6:18-22)

The biblical writers take for granted the story’s mythic and fantastic elements, both of measurement—the size of the Ark, the number of animals, the amount of food—and of relationship: they never suggest that Noah had any difficulty gathering the animals and getting them aboard ship. In fact, the midrash emphasizes the ease of the task: “since animals were so anxious to do God’s will, Noah had no difficulty in rounding them up...”⁸⁴ Again, Berend offers details that are both more and less realistic, writing that Noah’s neighbors watched as he ran to all the animals “and flattered them, stroked and invited them to travel on a small trip on the new Ark. Animals are mistrustful of humans.

⁸¹ Berend 4.

⁸² Frances Moore Lappé, *Eco-Mind* (New York: Nation Books, 2011), 51.

⁸³ Gonzales, *Deep*, 273.

⁸⁴ Linzey and Cohn-Sherbok 36.

You would be too.”⁸⁵ Berend notes how animals always have to yield their fur to humans. “Nevertheless, the animals listened reflectively to what Mr. Noah told them.”⁸⁶

But it is not enough to get the animals’ attention; Noah has to persuade them of their danger. “Noah described all the horrors and anxieties that would befall them if the large Flood came. But no one believes in danger before it is there. The sun was blinding, nowhere a cloud.”⁸⁷ Their response is similar to that of Noah’s human neighbors. The big animals refuse to believe that the water could reach their necks; the ostrich says it will simply stick its head in the sand. None believe that it will rain or that if it does there will “be such a giant inundation as the old gentleman imagined. And if such a flood came, the large colossus of a ship would probably sink.”⁸⁸ Finally, an upset Noah asks the falcons, storks and swallows to take his message everywhere, to convince the other animals to come. Berend recognizes the alienation between humans and nonhumans and addresses it directly. The animals have good reasons to fear humans and few to trust them. Noah’s fear for the animals shows Noah’s righteousness: in Jewish law, “the sign of a righteous person was concern for the welfare of God’s creatures.... Conversely, the maltreatment of animals was viewed as a sign of wickedness and roundly condemned.”⁸⁹

Part of Noah’s righteousness, according to midrash, is his knowledge of what and when to feed all the different creatures:

One view is that he brought pressed figs, an acceptable neutral diet for men and animals. (“Food for you and for them” indicates a single diet for both.) But another view is that he brought a different, individual diet for each species. (“For

⁸⁵ Berend 5.

⁸⁶ Berend 5.

⁸⁷ Berend 6.

⁸⁸ Berend 6.

⁸⁹ Linzey and Cohn-Sherbok 27. For a consideration of the problem of animal sacrifice in the Jewish tradition, please see Appendix B.

you and for them” indicates specific, individual foods for each species, with the human diet primary.)⁹⁰

This second view is the one Berend takes. She writes, “Noah hurried, gathering a freight of food, after each type of taste of all the different animals. That was no small work, for at that time the animals did not yet eat each other. The food had to be good, for otherwise Noah, for all his effort, would have at the end only a fully fed lion couple on board.”⁹¹

This agrees with the text of Genesis 1, which commands a vegetarian diet for humans and nonhumans, and the text of the Noahic covenant after the flood in Genesis 9, which allows humans to eat meat. But aboard the Ark, the fare for all is Edenic vegetarianism.

3.1.4 Embarkation

And after seven days the waters of the flood came on the earth.... all the fountains of the great deep burst forth, and the windows of the heavens were opened. On the very same day Noah with his sons, Shem and Ham and Japheth, and Noah's wife and the three wives of his sons entered the ark, they and every wild animal of every kind, and all domestic animals of every kind, and every creeping thing that creeps on the earth, and every bird of every kind--every bird, every winged creature....And those that entered, male and female of all flesh, went in as God had commanded him; and the LORD shut him in. (Gen. 7:10, 11b, 13-14, 16)

In Berend's book, Noah's sons' dogs help herd the elephants, polar bears, giraffes, peacocks and all into the Ark, showing clearly the difference between the wild animals and the domestic. Wild animals serve their own agendas; domestic animals serve human agendas. But once on board, order breaks down. The narrator tells us that “the animals behaved like animals to each other,”⁹² when in fact they are behaving like humans, complaining about the other members of their community. “The pigs thought the foxes stank. The cat snarled that the pig should hold its nose. The rabbits were highly

⁹⁰ Zornberg 59-60.

⁹¹ Berend 13.

⁹² Berend 8.

unmannerly, and the ox was outraged about that.”⁹³ Fed up with the “unpleasantness,” Noah explains that “mutual indulgence would be the first condition for all living and working together.”⁹⁴ I find it interesting that the principle chosen is mutual indulgence rather than mutual respect or mutual cooperation. But respect is more passive, a way of looking at other people, and cooperation is more active, suggesting a shared endeavor. Neither is as useful for guiding one’s actions when one is enclosed in a shared space with strangers. Indulgence suggests that we all sacrifice a little for each other.

Having gained silence, Noah hears tramping outside the ship and sees with “marveling joy” that the other animals he had called are coming in pairs. He wonders, “Had his well-meant words carried? Was it instinct?... It was enough that they were there. He said only, ‘Come on in, gentlemen.’ And left the rest to God.”⁹⁵ Last come Noah’s wife, reproachful, and the wives of Noah’s sons, who “took on the thing more easily than the silent mother. Young people are always happy to travel even if there could be rainy weather.”⁹⁶

3.1.5 Threat to Life

The flood continued forty days on the earth; and the waters increased, and bore up the ark, and it rose high above the earth. The waters swelled and increased greatly on the earth; and the ark floated on the face of the waters. The waters swelled so mightily on the earth that all the high mountains under the whole heaven were covered; the waters swelled above the mountains, covering them fifteen cubits deep. And all flesh died that moved on the earth, birds, domestic animals, wild animals, all swarming creatures that swarm on the earth, and all human beings; everything on dry land in whose nostrils was the breath of life died. He blotted out every living thing that was on the face of the ground, human beings and animals and creeping things and birds of the air; they were blotted out from the earth. (Gen. 7:17-23a)

⁹³ Berend 8.

⁹⁴ Berend 8.

⁹⁵ Berend 10.

⁹⁶ Berend 13.

The language describing the Flood is similar to the language from the creation story in Genesis 1; God basically undoes creation, covering the mountains and land, and “blotting out” all flesh. This is a powerful act of regret and, seemingly, of retributive justice. In his commentary on the Tanakh, the eleventh-century Rabbi Rashi described God’s action as “*andralamousia*,” a Greek term for “summary mass execution” that does not discriminate between individual merit and guilt.⁹⁷ Adam, in Genesis 2, is “originally formed out of the judicious mixture of dust and water.... All that is necessary to ruin the structure of his being is to infiltrate him with an excess of water...”⁹⁸

3.1.6 *Voyage*

Only Noah was left, and those that were with him in the ark. And the waters swelled on the earth for one hundred fifty days. (Gen. 7:23b-4)

The Genesis writers, interested in this tale for its ability to convey a message about the evil of humankind and the justice and mercy of God, spend no time considering the situation of the creatures, human and nonhuman, on the Ark. But even in single-species situations, community life is fraught with difficulties, just as it can offer joys. Alice Berend’s interpretation of this story makes this truth clearer than any other similar text I have seen. One thing she does that few writers do is consider the suffering of the Flood’s victims and of its survivors on seeing their world drown. At first, when the rain begins, the narrator tells us that “[a]ll the inmates of the ark triumphed. Now they were the ones able to mock.... But Noah did not laugh. He knew what would come.”⁹⁹ It is natural to feel better ourselves when others experience pain we have known; probably *schadenfreude* comes as naturally to humans as empathy. What makes us more or less

⁹⁷ Zornberg 44.

⁹⁸ Zornberg 47.

⁹⁹ Berend 15.

ethical is our ability to resist appreciating others' suffering, our ability to widen our circle of concern to include more and more—whether humans or nonhumans. Berend suggests that Noah, because of his faith in God's pronouncement that all who are not on the Ark will be blotted out, and because of the compassion that is the basis of his righteousness, has a very wide circle of concern, and this may not be because he is human. "All the inmates of the Ark" could very well include Noah's wife, sons, and daughters-in-law. No, apparently what makes Noah more compassionate than others is that he is Noah. And as the rain continued "everyone grasped why Noah was not in the mood to joke."¹⁰⁰ Perhaps no one can see such suffering and remain unmoved. "The waters climbed and climbed. The trees disappeared, the hills sank, and even the mountains drowned. There was no dry spot on Earth. All that was not able to live in the water had to go to ruin."¹⁰¹ Ethically, it is interesting the way the construction of inside/outside changes here. Normally, in our anthropocentric world, humans consider nonhuman creatures to be Others, outside our circle of moral concern, while all humans are considered to be inside together. Here, some animals become insiders and some humans become outsiders. This is theologically problematic since the biblical text claims that God decides who is in and who is out.

The other rare thing that Berend does is imagine what life on the Ark might really have been like for those forty days (or twelve months, if we take the Priestly account). The Ark's passengers experience seasickness, cheerfulness, homesickness, quarrel and dispute before they return to land. And they experience them all according to their kind.

¹⁰⁰ Berend 16.

¹⁰¹ Berend 16.

First, Berend reminds us that those on the Ark “were not born as seafarers. Mockery, insolence, battle air, even appetite had left them,”¹⁰² and both humans and nonhumans suffered in this way. All complain of nausea from the tossing of the ship; the cow claims to be sicker than the rest: “‘Believe you,’ it screamed, ‘that four stomachs in this case are easier to bear? My gracious!’”¹⁰³ They all agree that drowning would have been preferable. The watercolor illustrations by E.B. Smith posit a reality that is a strange inversion of the vision of God’s holy mountain described in Isaiah 11:6-7:

The wolf shall live with the lamb, the leopard shall lie down with the kid, the calf and the lion and the fatling together, and a little child shall lead them. The cow and the bear shall graze, their young shall lie down together....

All the animals look miserable. A polar bear is sprawled on his stomach, with a monkey lying beside him. An alligator and the male lion are sprawled back to back on the tilting deck, and the storks seem to be stumbling toward them. A monkey and Noah’s wife are both reaching out to Noah, who is holding his head. Their shared misery seems to be creating an unlikely situation of community support and lack of conflict.

When the storm begins to abate, their attitudes improve drastically. “The large Ark swam on the flood of infinity. New courage came to animal and man... They began to chat. Above all, they assured each other that they had not been the least bit seasick.”¹⁰⁴

The illustration of this page is similarly evocative of the vision of Isaiah 65:25a: “The wolf and the lamb shall feed together, the lion shall eat straw like the ox....” At a stone hearth, Noah’s wife ladles soup into a bowl, while one of the other wives ties napkins around the pigs’ necks. Joining them are an alligator, a kangaroo, pairs of monkeys, leopards, and foxes, and a boar. The storks, the dogs and an ostrich watch two of Noah’s

¹⁰² Berend 17.

¹⁰³ Berend 17.

¹⁰⁴ Berend 18.

sons play dice. In one corner, the elephants, camels and turtles are reading the list of pairs of pictures of animals that is posted on one wall. In another corner, the black bears and flamingos are dancing while the foxes, wolves, zebras and lions look on. The giraffes are craning their long necks in different directions to watch all the fun. It looks like a party.

Though Berend and Smith show Noah's wife as the feeder of the multitudes:

Noah...is singled out for praise in the midrash because of his self-evident sacrificial care for creatures. Each day, he fed each species its appropriate food at the proper time—he chopped straw for the camel, barley for the ass, vine tendrils for the elephant, and prepared grass for the ostrich and citrus for gazelles. Because of his untiring work, he was unable to sleep at night or during the day but the Lord richly blessed him.¹⁰⁵

At this point in the story, of course, that rich blessing still lies in the future.

After they have been getting along for a while, but also experiencing the boredom of shipboard life, cramped together with little light, the atmosphere changes again. "They were bored. Always the same pairs, always the same narrow space."¹⁰⁶ Avivah Zornberg notes that the biblical narrative emphasizes how God shut Noah and the rest into the Ark in Gen. 7:16: "An ambiguous slam of the door, protecting, imprisoning. Claustrophobia sets in, as we read of all the animal flesh, male and female, enclosed with Noah for twelve months."¹⁰⁷ She tells us the rabbis imagined Noah's constant prayer to have been Psalm 142:8, "Release my soul from enclosure," and suggests that his claustrophobia comes not just from the narrow physical space but also the narrow space of his duty, of "being entirely committed to the feeding of others"; the midrash "paraphrases the meaning of his prayer: 'for my soul is weary of the smell of the lions and the bears.'"¹⁰⁸ Zornberg points out how the sense of smell is related to memory and experience. Yet

¹⁰⁵ Linzey and Cohn-Sherbok 27.

¹⁰⁶ Berend 19.

¹⁰⁷ Zornberg 63.

¹⁰⁸ Zornberg 63.

nothing has prepared the passengers of the Ark for the variety of smells they are living among in that close space.

Then, on top of this claustrophobia, we also get a sense of agoraphobia, the fear and anxiety that comes from wide-open spaces. Berend writes, “In addition, outside all around water, above water, sideways water, below water. One longs for land after moisture...”¹⁰⁹ In one of Smith’s illustrations, we get a sense of this endless water. Smith frames the picture in such a way that we, the viewers, are just a little bit above the water, looking up at the immense, enclosed Ark. All around the Ark, we see dolphins leaping, while swordfish, hammerhead sharks, and sperm whales play in the water. The only living beings left, who are outside the Ark, are not exactly outside the moral concern of the passengers of the Ark, because this “outside” is their normal environment; they do not require Noah to house and feed them. In the background, an angry red sun sets on the infinite horizon of silver water. Unlike an immensity of land, which might provide humans with wood, rock, and metal with which to make tools with which to “master” their environment, this water only provides uninhabitable space. In their freedom, the creatures who make their home in the deeps are “insiders”—privileged agents not threatened by the environment; the passengers of the Ark are “outsiders”—a displaced minority to whom the environment is a threat. Smith, as Gaston Bachelard would say, “has juxtaposed in us claustrophobia and agoraphobia; he has aggravated the line of demarcation between outside and inside. But in doing so, from the psychological standpoint, he has demolished the lazy certainties of the geometrical intuitions by means

¹⁰⁹ Berend 19.

of which psychologists sought to govern the space of intimacy.”¹¹⁰ Like the idyllic visions of Isaiah, this vision of the Ark subverts our understandings of social space.

The waning of the festive atmosphere also causes them to remember their homes. “The lion roared after the desert like a baby after its mother. The llama spat fury and sorrow around itself. The frogs hopped into the saliva and croaked sadly, ‘Alas, how the homeland is so beautiful.’”¹¹¹ The ship is not homelike for anyone, even the humans. And in their longing for their different homes, the animals sing their laments according to their kind: “The dogs howled.... The sheep bleated. The crows cawed. The snakes hissed. The ducks chattered. The cats meowed. The roosters squawked. The mice chirped.”¹¹² In the illustration, Noah’s wife holds her ears. Righteous Noah, holding his head in his hands, “murmured, ‘Lord, they know not what they do.’”¹¹³

Having sadly recalled that they were never meant to be enclosed together in a manmade structure, the animals and humans lose patience with each other and begin to quarrel. “They called each other animal names that you know today as the worst insults. They bored with horns, roughed each other’s fur, bit, knocked, and trampled each other.”¹¹⁴ But the quarrelling is not limited to the animals. “Even Noah’s mature and well-behaved sons slapped because Shem found the tiger taking up more room than the zebra. Ham and Japhet took up the most room.”¹¹⁵ The quarrel is the product of boredom and homesickness. In her essay, “Nostalgia and Hope in a Homeless Age,” Karen J.

¹¹⁰ Gaston Bachelard, *The Poetics of Space*, Trans. Maria Jolas (Boston: Beacon Press, 1964), 220.

¹¹¹ Berend 19.

¹¹² Berend 19.

¹¹³ Berend 19.

¹¹⁴ Berend 20.

¹¹⁵ Berend 20.

Warren distinguishes four ways of defining the word “home”: as a house, as an intentional community, as a bioregion, and as:

a house, intentional community, *and* bioregion *where one’s individual and community basic needs, life-affirming values, and sustaining relationships are met*. These are needs, values, and relationships that take into account both human and nonhuman environmental concerns, and are satisfied in respectful and ecologically sustainable ways.¹¹⁶

The Ark is clearly serving, for the time being, as a house and an intentional community, and Noah is doing his best to provide the foods that different bioregions would provide for sustenance. But especially for the animals who come from other climes, such as the polar bears and penguins, or those whose natural habitat is wide open, such as the lions and the birds, the Ark cannot serve as a bioregion.

3.1.7 Threat Abated

But God remembered Noah and all the wild animals and all the domestic animals that were with him in the ark. And God made a wind blow over the earth, and the waters subsided.... Then God said to Noah, “Go out of the ark, you and your wife, and your sons and your sons’ wives with you. Bring out with you every living thing that is with you of all flesh—birds and animals and every creeping thing that creeps on the earth—so that they may abound on the earth, and be fruitful and multiply on the earth.” So Noah went out with his sons and his wife and his sons’ wives. And every animal, every creeping thing, and every bird, everything that moves on the earth, went out of the ark by families. (Gen. 8:1, 15-18)

Both the biblical tale and the children’s version of it have happy endings. Noah releases birds to tell him of landfall, which they find atop Mount Ararat. God remembers Noah and opens the Ark to set its passengers free. Under a bright rainbow, the animals leave the Ark in families, though they had come aboard in pairs. Noah builds an altar and gives thanks to God for their deliverance, and God makes a covenant with the humans and with all living creatures. In our reading of this story, however, with our goal being a

¹¹⁶ Karen J. Warren, “Nostalgia and Hope in a Homeless Age,” in *The Longing for Home*, Ed. Leroy S. Rouner (Notre Dame: U of Notre Dame Press, 1996.), 218. Italics the author’s.

useful model for environmental survival on our endangered planet, the Ark for us is the Earth. There will be no Mount Ararat, no running free from the perils that beset us. So instead of looking forward to the hope of the rainbow and the ambiguous covenant God makes with all creation, promising safety and allowing creatures to eat each other's flesh, we will stop. We will remember Noah and his passengers, adrift on a rising sea that covers a devastated Earth, and we will leave them there, busy with the difficult practices of communal life, all in one boat, together.

3.2 The Ark as a Model of Environmental Survival

The worldview modeled by the Ark is very different from that modeled by the *Titanic*. The *Titanic* represents a world that is mechanistic, progressivist and reductionist; individualistic and anthropocentric; and motivated by profit and in denial of peril. In contrast, the Ark represents a world that is organic, systems-focused and dynamic; communal and biocentric; and motivated by peril and mobilized by the need for survival. We see these characteristics in the organization of the Ark and its passengers, and in their interactions. An examination of them will show their clear survival value.

As Capra observes, we have good reasons for our modern mechanistic worldview: "living organisms do act, in part, like machines. They have developed a wide variety of machinelike parts and mechanisms... This does not mean that living organisms *are* machines."¹¹⁷ Unlike clocks, which have a specific number of replaceable parts that work together in a definable, pre-established way, organisms "show a high degree of internal flexibility and plasticity."¹¹⁸ The human brain, for example, controls the activity of different parts of the body and of different functions of perceiving and thinking, and yet,

¹¹⁷ Capra 266.

¹¹⁸ Capra 268.

when one part of it is injured, another part can take over those roles. But while some organs can be transplanted, nothing from outside the body can replace the brain itself.

Further, “machines are constructed, whereas organisms grow,” which implies that “the understanding of organisms must be process-oriented.”¹¹⁹ We see the difference when we look at the reductionist investigation of the *Titanic* disaster, with its longing for simple answers, as one might reasonably expect when looking at a broken clock. But social realities are not machines; they are complex systems that often act like organisms.

Machines function according to linear chains of cause and effect, and when they break down a single cause for the breakdown can usually be identified. In contrast, the functioning of organisms is guided by cyclical patterns of information flow known as feedback loops.... When such a system breaks down, the breakdown is usually caused by multiple factors that may amplify each other through interdependent feedback loops.¹²⁰

This difference is important when thinking about survival, since survival depends upon an accurate understanding of the world-as-it-is. Misperceptions lead to inappropriate, and sometimes fatal, behavior. “The ability to adapt to a changing environment is an essential characteristic of living organisms and of social systems.”¹²¹ Admittedly, some social systems do this better than others, in part due to their shared assumptions. Passengers on the *Titanic*, believing the ship unsinkable, played soccer with chunks of the iceberg that fell to the deck. Passengers on Berend’s Ark recognize the need for mutual indulgence in the face of communal peril and choose to practice self-discipline.

Another way of saying this is that living organisms are self-organizing systems: their “order in structure and function is not imposed by the environment but is established

¹¹⁹ Capra 268.

¹²⁰ Capra 269.

¹²¹ Capra 273.

by the system itself.”¹²² They are not isolated from their environment, but interact with it constantly. This dynamism is different from progressivist or supercessionist activity. The goal is not future growth or wealth; it is present flourishing. “The two principle dynamic phenomena of self-organization are self-renewal...and self-transcendence...”¹²³ These two phenomena make an organic, dynamic, systems-focused worldview more appropriate for human survival for the current situation of environmental catastrophe. We see both at work in Berend’s imaginative retelling of the Ark story, with its emphasis on how the human and nonhuman passengers constantly renegotiate their relationships.

Through this we also see a principle that Capra notes as coming from both “the study of living and nonliving matter and... the teachings of the mystics—the universal interconnectedness and interdependence of all phenomena.”¹²⁴ The Ark is not a zoo with a compartment for each individual species, none of which interact. It is a community attempting to define a mutual life together. Capra also points out:

Detailed study of ecosystems over the past decades has shown quite clearly that most relationships between living organisms are essentially cooperative ones, characterized by coexistence and interdependence, and symbiotic in various degrees. Although there is competition, it usually takes place within a wider context of cooperation, so that the larger system is kept in balance.¹²⁵

This contrasts with the Darwinist assumptions underlying modern life. In Darwin’s theory of evolution, “the unit of survival was the species,” but that is an inaccurate model. “What survives is the organism-in-its-environment. An organism that thinks only of its own survival will invariably destroy its environment and, as we are learning from

¹²² Capra 269.

¹²³ Capra 269.

¹²⁴ Capra 303.

¹²⁵ Capra 279.

bitter experience, will thus destroy itself.”¹²⁶ The advantage of the voyage model is that it models the community-in-its-environment, and the Ark model emphasizes the primary importance of nonhuman nature in-and-as environment, as well as in-and-as community.

Finally, the Ark exemplifies the opposite of the “technological hubris” shown with the *Titanic*. Noah and his passengers show a humility and flexibility of perception that enable their survival. They embody the three rules of survival: “Perceive, believe, then act.... [A]s the environment changes (and it always does), what you need is versatility, the ability to perceive what’s really happening and adapt to it.”¹²⁷ Like Noah, survivors analyze, plan, and take correct decisive action, but the crucial piece must happen first. “They see opportunity... in their situation. They move through denial, anger, bargaining, depression, and acceptance very rapidly.... It begins with the paradox of seeing reality—how hopeless it would seem to an outside observer—but acting with the expectation of success.”¹²⁸ This is one main reason I choose to stop short of the covenant and the rainbow. Although the covenant emphasizes God’s relationship with nonhuman nature as well as with humans, in fact it presents as constructed by God the alienation between humans and animals¹²⁹; speaking to the humans, God says:

The fear and dread of you shall rest on every animal of the earth, and on every bird of the air on every animal of the earth, and on every bird of the air, on everything that creeps on the ground, and on all the fish of the sea; into your hand they are delivered. Every moving thing shall be food for you... (Gen. 9:2-3a)

This is even more problematic when we consider that this change in relationship between humans and nonhumans seems to have been caused by their long journey together. This

¹²⁶ Capra 288, 289.

¹²⁷ Gonzales, *Deep*, 263.

¹²⁸ Gonzales, *Deep*, 271.

¹²⁹ John Olley, “Mixed Blessings for Animals: The Contrasts of Genesis 9,” in *The Earth Story in Genesis*, Ed. Norman Habel and Shirley Wurst (Cleveland: Pilgrim Press, 2000), 130.

is not an outcome of communal life that I think we want to perpetuate. And the rainbow, with its easy promise that God will not devastate the world with another flood, is misleading in a time when the sea level is expected to rise at least three feet by 2050, causing massive infrastructure breakdown, forced migration, and crop failure in the world's low-lying cities and countries.¹³⁰

The hope I see in the Ark story does not need to be given to the Ark's passengers because it is a hope that never leaves them. It is a hope exemplified by Frances Moore Lappé, who wrote *Diet for a Small Planet* in 1971, and forty years later is still doggedly working to empower people for environmental flourishing. She says, "Hope is not wishful thinking.... It is a stance toward life we can choose...or not.... We can only have honest, effective hope if the frame through which we see is an accurate representation of how the world works."¹³¹ It is a hope that Gonzalez says must paradoxically be paired with resignation to allow people to survive; the resignation recenters the responsibility for rescue squarely on the survivors' shoulders, while the hope "fixes their determination" to live and empowers them to act.¹³² It is the kind of hope that I believe we need to cultivate as a society, and, as I will argue in the next chapter, it is the kind of hope the Christian church is in a perfect position to embody and to teach.

3.3 Limitations and Adjustments

The Ark model, being more relational and less anthropocentric than the *Titanic* model, and having survival rather than luxury as its central theme, is better than the *Titanic* model, but it also is imperfect, both in the elements of the story itself and the way

¹³⁰ Peter D. Ward, *The Flooded Earth: Our Future as a World without Ice Caps* (New York: Basic Books, 2010), 20. Ward, a paleontologist, believes that catastrophic sea-level rise of this kind was the basis for the Noah story and other cultures' flood myths.

¹³¹ Lappé 173.

¹³² Gonzales, *Deep*, 200, 273.

it has been used throughout history. First, the choice of Noah, his wife, sons and their wives privileges one family and heteronormative social constructs that require pair-bonding. Ethnic Others, homosexuals, and unpaired humans are left to drown.¹³³ Second, the choice of male-female pairs, beyond repeating the assumption of heteronormativity in nonhuman nature, also participates in what Whitehead called the “fallacy of misplaced concreteness,” the assumption that the generalized “specimen” is a truer representation of a group than the actual individual members of the group. The idea that human fault should lead to divine punishment, not only of humans but of nonhuman nature as well, is problematic also. Third, we know the suffering caused by St. Cyprian’s concept of *extra ecclesiam nulla salus*; this weakness should be easier to counteract by posing the Earth, rather than the Church, as the lifeboat. More difficult is the use that has been made of Noah’s three sons as the progenitors of different races of humanity and of their differences as justifications for enslavement. Nevertheless, for the purposes of modeling worldviews, the story of the Ark voyage is a familiar tale, popular with children and adults that is also deeply resonant in its potential for helping us envision another way of being in the world, a way that privileges community over individuals, and flourishing over profit and loss.

¹³³ From this perspective, the *Titanic* would appear superior, as one-third of its passengers were saved in its lifeboats, as opposed to a microscopic specimen of the passengers of Earth saved in the lifeboat of the Ark. This is a valuable lesson; we know that, however large and however many lifeboats we construct, we will be unable to save everyone—human or nonhuman—from the iceberg of global climate change.

Chapter 4: Conclusions and Future Directions

*Full fathom five thy father lies:
Of his bones are coral made:
Those are pearls that were his eyes:
Nothing of him that doth fade
But doth suffer a sea change
Into something rich and strange.*

– *The Tempest*, I.ii.394-9

Winston Churchill, a survivor and the leader of a nation of survivors, once said, “We shape our buildings and thereafter they shape us.” The same can be said of our worldviews. Western civilization in the modern era has constructed and disseminated patterns of perceiving and acting in the world that are powerful and deeply problematic for the survival of life on Earth. They lead us to faulty mental models of reality that cause us to engage in inappropriate behaviors—consumerism, reliance on fossil fuels, climate change denial—that, far from helping us survive the current crisis, will only serve to imperil us further. But we are not only shaped by our inherited worldviews. We are also shaped by our faith in God, our communal life together in Christ, and the sustaining power of the Holy Spirit.

In the long term, I believe that the environmental catastrophe that has already begun will force the Church to transform its roles and functions on all levels. When sea-level rise and storm surges cause coastal flooding worldwide, “the damage to agriculture, infrastructure, and other developed human property will be enormous” and major economic depression is quite likely.¹³⁴ Major portions of the populations of affected low-lying areas will be dislocated. Amid such conditions, stewardship may transform from

¹³⁴ Ward 35.

administrative finance to political activism. Hospitality may transform from making coffee after liturgy to seeking housing for displaced people.

But such transformation is highly unlikely unless Christians first accept the hard science warning us of the future to come. In the words of *Gaudium et Spes*, “At all times the Church carries the responsibility of reading the signs of the time and of interpreting them in the light of the Gospel, if it is to carry out its task.”¹³⁵ For this reason, I believe that what we must first work to transform is formation itself, moving it out of the ambit of the clergy and into the sphere of the laity, changing the pedagogy of the learning experience, and consciously building into formation curricula institutional analysis, systems-thinking, and an ethic based on the theory of responsive cohesion promoted by the ethicist Warwick Fox.

The advantage the laity have is that our lives are firmly anchored in the world that is changing. In our families, neighborhoods, schools and workplaces, we are in close relationship to the material world that is our environment, and here I mean environment both as the “ecosystematically self-organizing” natural environment and as the “nonhuman, nonsentient, nonliving, and intentionally organized...human-constructed” built environment.¹³⁶ The average Christian in North America today is far less likely to be like Moses or Paul, traveling long distances to do God’s bidding, and more likely to be like Noah doing God’s work in their local community, whether it be a classroom, a laboratory, a temp agency, or an electricians union. What laypeople can bring to the

¹³⁵ “Pastoral Constitution on the Church in the Modern World,” in *Vatican Council II: The Conciliar and Post Conciliar Documents*, Vol. 1. New Revised Ed. Ed. Austin Flannery (Grand Rapids: Eerdmans, 1992), 905.

¹³⁶ Warwick Fox, *A Theory of General Ethics: Human Relationships, Nature, and the Built Environment* (Cambridge: The MIT Press, 2006), 13.

project of formation in the face of environmental crisis is precisely our breadth of experience in the created world and the built world, in nature and culture.

We will need to act at the congregational level, creating study groups to disseminate information and help people reflect on it theologically and ethically, to discern what God is calling us to do not just within our congregations and denominations but within our family-, school- and work-lives, and indeed our lives as citizens. Teaching Christians how to do the kind of institutional analyses that Episcopal Divinity School teaches in its Foundations course will spread the understanding of the interlocking oppressions that are at the heart of not only socioeconomic inequality but also ecological unsustainability. What Noah's story shows, if nothing else, is the fundamental interrelationship of all God's creatures. It also points to a new way of doing formation, a way based on the macro-analysis seminars that came out of the civil rights, anti-poverty and anti-war movements of the 1960s and 70s:

The pioneering participants realized that much more material could be covered if participants reported on different readings rather than everyone reading the same thing.... Practices from group dynamics, the women's movement, and other sources could equalize participation and maximize the social change impact of the learning process.¹³⁷

This study group pedagogy, with its emphasis on mutual knowledge formation that leads to meaningful social action could serve as a good model for what we might call mutual formation.

Such a pedagogy would model as well as teach a more organic, relational worldview of the kind that undergirds Warwick Fox's theory of general ethics. Fox argues that "the source of the most fundamental value there is in the world—the

¹³⁷ Robert A. Irwin, *Building a Peace System* (Washington, DC: ExPro Press, 1989), 223.

foundational value—consists in a basic *relational quality*...that can be described as one of *responsive cohesion*.”¹³⁸ It is beyond the scope of this thesis to examine responsive cohesion in depth; however, a brief definition is “*cohesion that arises through the mutual responsiveness of the elements or salient features of the matter under consideration* (regardless of whether that responsiveness can best be characterized as intentional or merely functional, literal or metaphorical).”¹³⁹ Fox points out that the true responsiveness is not formulaic or routine but rather “occurs when things can be characterized as answering to each other in a deep, significant, meaningful, or genuine sense as opposed to a superficial...or inauthentic sense.”¹⁴⁰ It has a flow and a liveliness that we can feel, whether we use it to describe people, places, architecture, conversations, art, or even ideas. Such a fundamental value will allow us to make judgments about the interhuman issues, as Kantian ethics do; and about animal welfare and ecosystem integrity issues, as environmental ethics do; and also about ethics of the human-constructed environment, from questions of sustainability to questions of aesthetics. Given that more than half of the world’s seven billion humans now live in cities, we desperately need to learn an ethic that will help us navigate the complexities of sustainability not just between humans, or between humans and nonhumans, but also between all of us and our built environments. Whether the world is a *Titanic* or an Ark for us, the building matters.

Finally, if we are to survive, we must remember that, as Gonzales tells us, “Gratitude, humility, wonder, imagination, and cold, logical determination: these are the survivor’s tools of mind.”¹⁴¹ The first four of these are commonly seen as positive

¹³⁸ Fox 59. Italics the author’s.

¹³⁹ Fox 73. Italics the author’s.

¹⁴⁰ Fox 74.

¹⁴¹ Gonzales, *Deep*, 200.

religious values; the last is not, though our forebears in the faith show it repeatedly throughout the Bible. The Church is ideally placed to model cold, logical determination tempered by gratitude, wonder, imagination, and especially humility. But because humility rarely comes naturally to institutions, I believe we will require a sea change in the Church to become the kind of people who can make up a humble institution.

A sea change of the kind Shakespeare describes in *The Tempest* is a transformation where the form is retained but substance is replaced. That sounds sacramental to me. Change can be frightening. And change is the way life happens. “So we have no choice about whether to change the world. We are changing it every day. The choice is only whether our acts contribute to the world we want...or not.”¹⁴² I would add that God’s good and sometimes violent world is going to change us as well, whether we like it or not. But how we face it, and when we begin to face it, may decide whether we are blotted off the face of the Earth, or change into something rich and strange, like the communities in Isaiah’s prophecies.

The water is rising. It is time to decide.

Prayer for Travelers at Sea:

O ALMIGHTY God, whose way is in the sea, and whose paths are in the great waters; Be present, we beseech thee, with our brethren in the manifold dangers of the deep; protect them from all its perils; prosper them in their course; and bring them in safety to the haven where they would be, with a grateful sense of thy mercies; through Jesus Christ our Lord. Amen.

-- Scottish Book of Common Prayer 1912

¹⁴² Lappé 193.

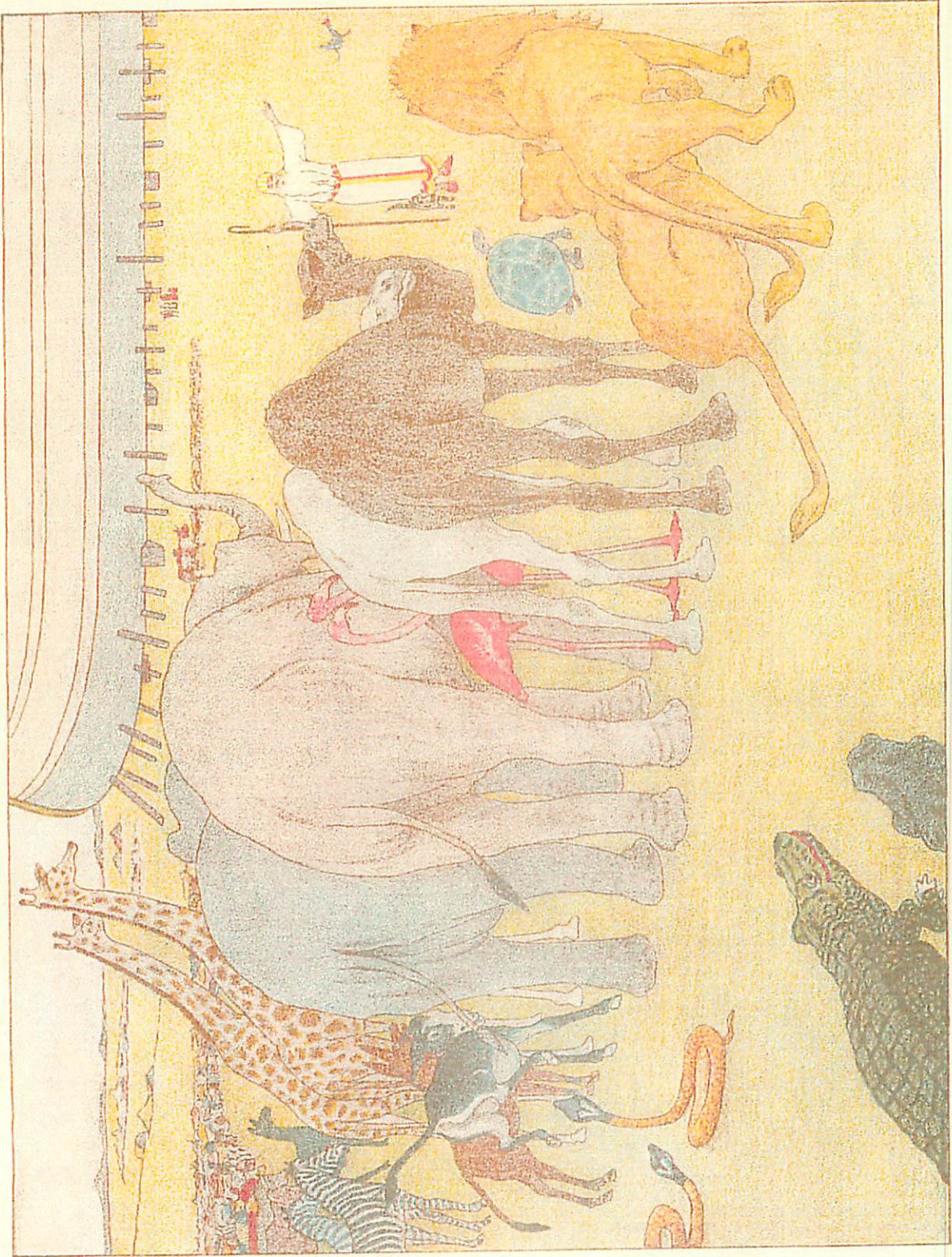


Figure A2a: Noah Convenes the Animals and Finds No Ear. Source: Berend + Smith, 5.



Figure A2b. Noah Convenes the Animals and Finds No Ear. Source: Berend + Smith 6.

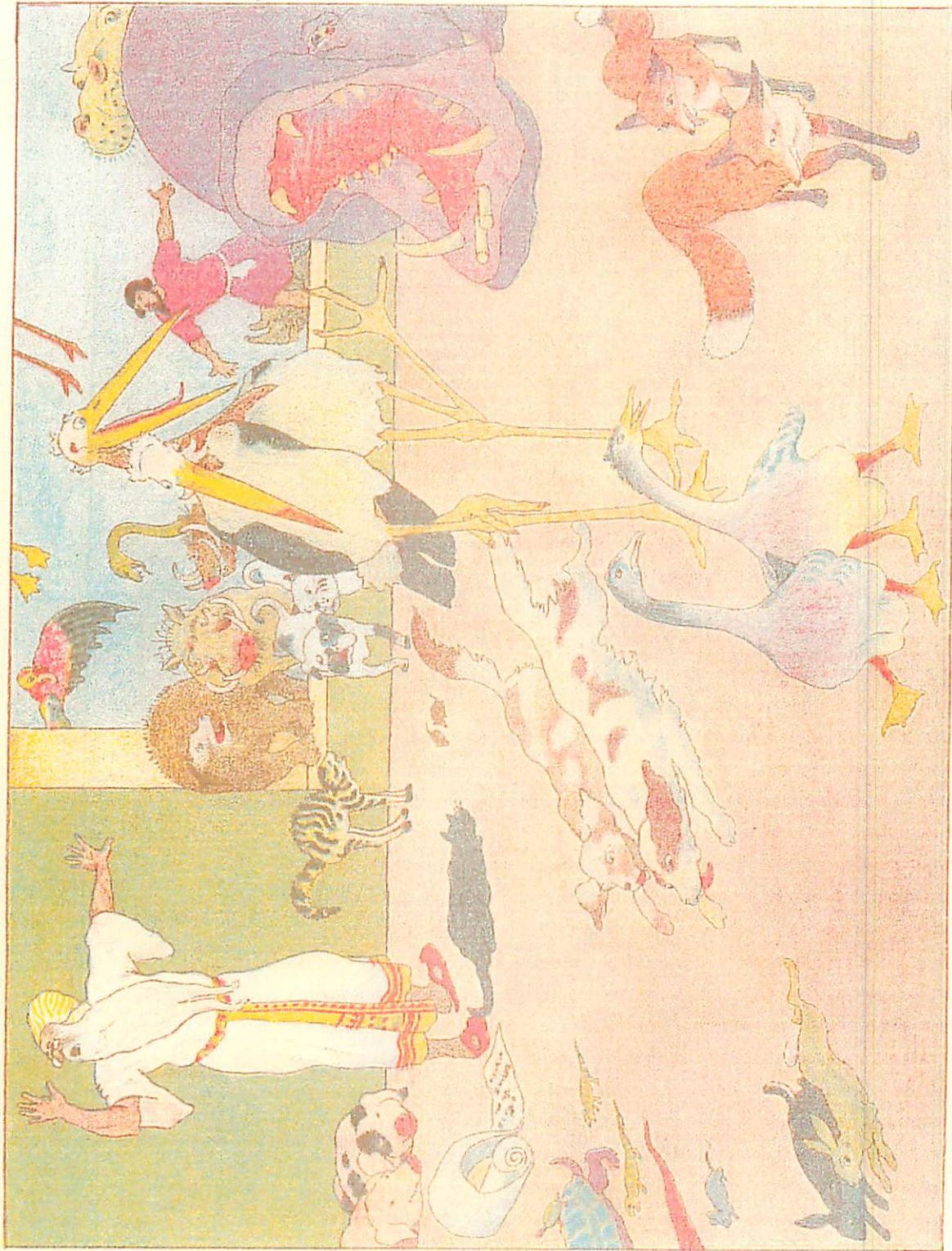


Figure A3. Unmannerly Conduct. Source: Berend & Smith 8.



Figure A4. Food and Family. Source: Berend + Smith 13.

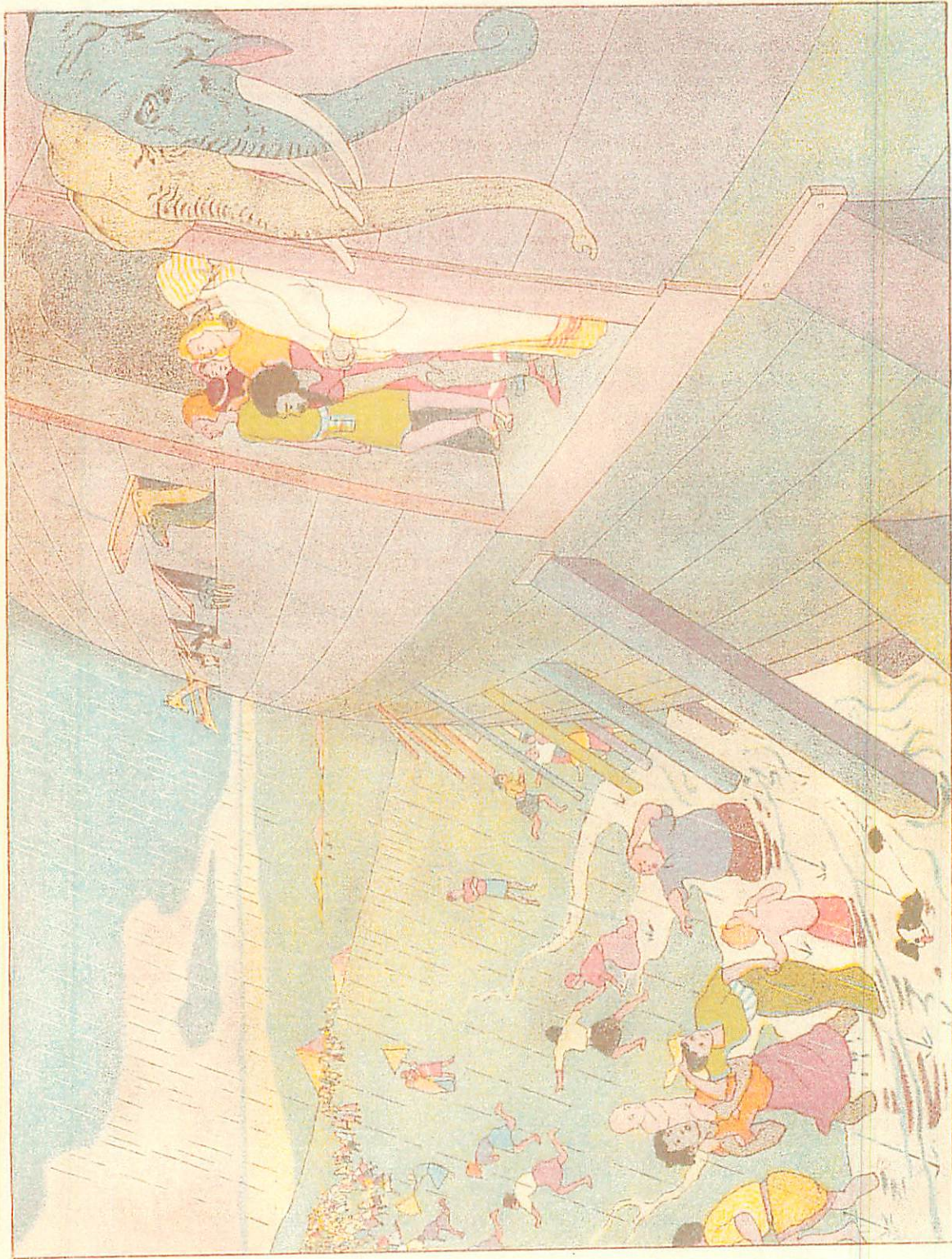


Figure A 5. The First Deep. Source: Berend



Figure A6. The Flood. Source: Berend + Smith 16.

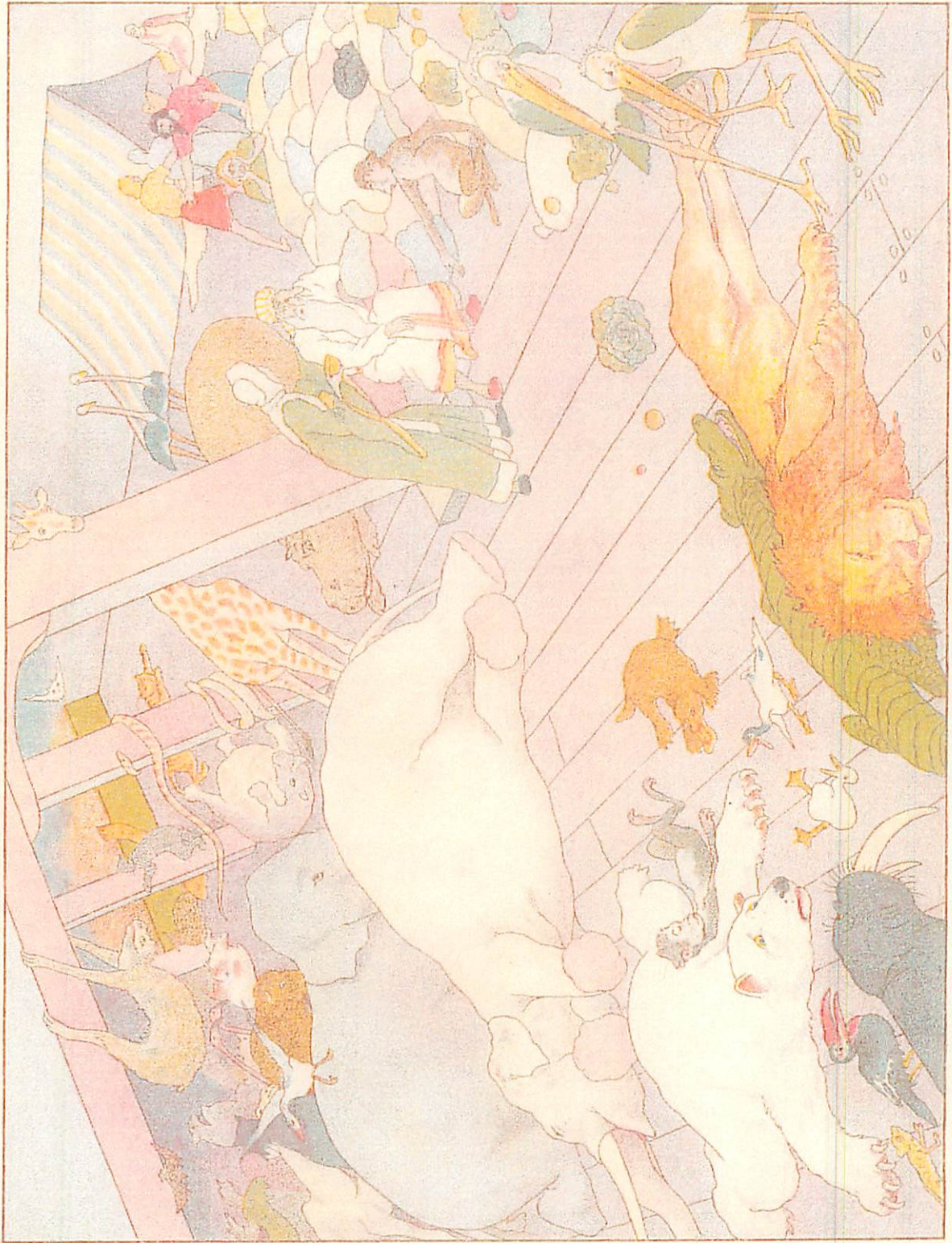


Figure A7. The Seasickness. Source: Berend + Smith, 17.



Figure 48. Cheerful Trip. Source: Berend + Smith, 18.

Appendix B: The Problem of Animal Sacrifice

Readers familiar with the prominence of animal sacrifice in the Hebrew Bible may be surprised at the assertion that care for nonhuman creatures was considered an important part of righteousness. However two things need to be considered.

First, any tradition as long as the Jewish tradition is bound to have apparent inconsistencies due to the abundance of cultural accretions over the centuries. And most human cultures, including our own today, have inconsistent relations with nonhuman animals, as illustrated in the title of a recent book examining these paradoxes: *Some We Love, Some We Hate, Some We Eat*.

More importantly, however, a closer look at the variety of animal and non-animal sacrifices prescribed in Leviticus suggests that ancient Hebrew animal sacrifice was not the “unholy waste” that it might appear to us today.¹ As Jonathan Morgan observes, the repeated insistence that the sacrificial animals be perfect and without blemish not only ensured that weak animals were not “offloaded as offering (Lev. 22.21-25)—a point which testifies to the fact that the economic loss to the offerer was not insignificant...”² The requirement also ensured “that the animal was seen as worthy of, and able to live up to, the cultic role required of it. In order to perform its ritualistic role, the sacrificial animal needed to be holy.”³

Morgan differentiates between members of the community of the covenant, who would be harmed by the withdrawal of God’s presence, and members of the community culpable for sin. It is only by virtue of the sacrificial animal’s membership in the first but

¹ Jonathan Morgan, “Sacrifice in Leviticus: Eco-Friendly Ritual or Unholy Waste?” in *Ecological Hermeneutics*, Ed. David G. Horrell, Cheryl Hunt, Christopher Southgate, and Francesca Stavrakopoulou (New York: T&T Clark, 2010), 33.

² Morgan 42.

³ Ibid.

not the second community that it can perform its role. “Therefore, far from being a poor substitute, the sacrificed animal is a holy thing that performs a role on behalf of humans which they could not and could never perform for themselves.”⁴

It is true that Morgan’s own language describing the sacrificial use of animals supports an instrumentalist view of them as things, a view largely supported in the writings of classical and Christian thinkers. However, “the important thing to grasp is that the legacy of Aristotle—and Augustine and Aquinas—represent only *one* way of looking at the world. There are others: and these other ways can arguably claim to be as, if not more, authentically Jewish and Christian as the dominant ones that obscured them.”⁵

⁴ Ibid.

⁵ Linzey and Cohn-Sherbok 13.

B: Principles for Democratic Social Change Study Groups

The participatory format and processes used in this book originated in the "macro-analysis seminar" movement. That movement began in the early 1970s among veterans of the civil rights, anti-poverty, and antiwar movements. Many of those activists had believed that the U.S. was a prosperous and democratic society whose remaining problems — pockets of poverty, racial inequality — could and would be solved by citizen initiatives to prompt government action. Instead, they found a stubborn power structure responsive only to extraordinary efforts and sacrifice (as in the civil rights movement) and more interested in waging war in Southeast Asia than in ending poverty or redressing inequality at home. As the 1960s drew to a close, with war, racism, and poverty persisting, a host of new problems entered public awareness, beginning with the emergence of the women's liberation, gay liberation, and ecology movements.¹

Parallels and interconnections among such problems and the conditions that perpetuated them led many activists to decide that they were up against a "system." While a few felt confident they could define that system, many found old categories and prescriptions inadequate and felt the need to increase their understanding of what was wrong, how things might be different, and how change could be brought about.

Traditional education, compartmentalized into disciplines, slow to recognize new realities, and complacent toward injustice, was not the answer. Yet independent study groups faced difficulties, too: Where to begin? How to make the costs in time and materials manageable? How to insure that the learning process fostered rather than undermined activism, and remedied rather than accentuated the inequalities of expertise and educational background participants brought to the group?

Macro-analysis seminars were devised with these concerns in mind. (The term "macro-analysis" was coined to indicate the importance of getting the "big picture" — "macro" is Greek for "big" — of how different problems were related, but soon "macro seminar," "macro format," and "macro process" referred equally much to the unique combination of learning and empowerment processes used.)

The pioneering participants realized that much more material could be covered if participants reported on different readings rather than everyone reading the same thing. Ideas as to useful subject matter, and growing expertise, could be shared if study group participants published a recommended outline of topics and readings that could be revised over time as other groups used it and found newer or better materials. Practices from group dynamics, the women's movement, and other sources could equalize participation and maximize the social change impact of the learning process.

The first edition of *Organizing Macro-Analysis Seminars: A Manual* was published in 1972 (in mimeograph) by the Philadelphia Macro-Analysis Collective. It contained extensive group process suggestions and an outline of 24 (or, optionally, 12) weeks of readings grouped in five parts:

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ecological problems, U.S. relations with the Third World, U.S. domestic problems, visions of a better society, and strategies for getting from here to there. From 1972 through the early 1980s some 500 macro-analysis seminars were conducted in the U.S., Canada, and other countries, and several revised editions of the reading list were prepared. Most seminars were organized by social change activists, many through religious groups, and many also in over a dozen colleges and universities which conducted macro seminars for course credit at the initiative of faculty or students.

The "macro" format and processes were used in other "macro manuals" with readings adapted to other countries, or focused on subjects such as Peace Conversion, Urban Transportation, Political Theory and Strategy, Multinational Corporations, and Central America.

Portions of the 1975 "macro manual," reproduced verbatim or slightly revised, make up part of the "How to Organize a Peace System Study Group" section of this book. The name "macro-analysis seminar," never very clear to newcomers, has been dropped in favor of the wordy but less opaque "democratic social change study group"; but all the essentials of the participatory, activism-oriented approach have been retained.

The text that follows, originally entitled "Underlying Principles of Macro-Analysis" (1975), was, if memory serves, mostly written by the late Jim Nunes-Schrag, a lively and dedicated grassroots educator who is sorely missed. It has been abridged and slightly revised to improve its clarity and relevance for peace system study groups. The "we" in the text, referring to the Philadelphia Macro-Analysis Collective, no longer exist as such. But, as in 1975, it seems important — precisely because participants are strongly encouraged to adapt the format and processes to their own needs — to spell out the principles that have made for successful democratic study groups.

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This text makes explicit the principles, values, and assumptions we have found valuable for democratic social change study groups. In addition to making the principles clear, it should help study group organizers and participants make changes if they want to (a) agree that a certain principle is good and innovate in how to apply it; (b) lay aside a principle and develop an alternative one, and practical ways of implementing it; (c) incorporate new principles and ways of implementing them. Any of these may work out well as long as the innovators are conscious of what they are doing. It is important to be really familiar with the format and the various processes and the part they play in implementing the guiding principles before trying to change them.

This is not to discourage creativity — only to caution that inadequately thought-out changes may disorient a study group or damage its morale. Experience and thoughtful experimentation, on the other hand, can yield valuable lessons. For example, a major lesson of past study groups is the importance of encouraging a positive, hopeful, mutually affirming and trusting attitude among

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participants. Why? Because a major goal of the groups is helping people become more effective social change agents, and we have found that the attitudes and spirit we create in our work together play a large part in sustaining our capacity to continue learning and working.

A. Group Process

1. *The maintenance of participatory democracy in all the activities of the study group is vital.* This is so for many reasons, two very important ones being that (a) participatory democracy is a crucial part of our vision of a better society, and we will best achieve that by practicing it now at every possible opportunity; and (b) the evidence of many democratic study groups, especially when contrasted with standard high school and college learning situations, is that people learn faster and more effectively, and are more likely to move on to social change applications of their learning, when they are in charge of the learning situation.

Participatory democracy is maintained primarily through procedures that encourage: a) equal participation in the group, and b) equal sharing within it of the power and information necessary for decision-making. Equal participation is aided by: everyone's possession of, and familiarity with, the texts explaining the format and processes;² regular rotation of the role of facilitator; and an agenda which is on a large sheet of paper in view of everyone and which is reviewed each meeting and is open to changes suggested by any participant. Procedures encouraging equal participation include: several occasions on which the person speaking is not to be interrupted, including report giving, brainstorming, and "think and listen"; and the availability of exercises to raise the consciousness of people who tend to speak too frequently (e.g., giving up one of a small number of allotted matches each time one speaks, and not being permitted to speak when one's matches are gone); the reports format in which each person has the opportunity to contribute information; and agenda items like excitement sharing which include everyone.

2. *Participants need to get to know one another more deeply than just in the limited role of co-learners.* If group members come to trust and appreciate each other more and more as the study group goes on, the collective learning will be a more enjoyable experience; the group will come to mean more to each participant; more effective learning will occur, because people will feel trustful enough of the group to share ideas they aren't really sure about; participants will be more likely to develop meaningful and implementable social action plans; and the quality of meetings will improve because everyone will genuinely care about giving good reports, being an alert facilitator, timekeeper, etc.

Procedures which encourage this deepening level of trust include the values clarification exercises³ and other structured sharing in the introductory sessions of the study group; excitement sharing, and occasional extended excitement sharing; potluck meals together, etc.

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3. *All of us can develop a kind of learning/teaching experience that is empowering* to us because we will grow in our reliance on and respect for our ability both to think clearly and to successfully tackle problems, rather than concluding that only the "experts" know enough to act on these issues. This principle breaks down into two more specific ones:

(3A) *Each group knows best what its own unique needs are.* A variety of options are available for dealing with a specific topic, situation, need, etc. Each group should assess its own needs, and then determine how best to meet them in the context of the overall structure.

(3B) *Each group needs to keep doing the things that will build a solid, authentic sense of achievement, and the things that will help it recognize and appreciate what it is achieving.* Factors important in producing this sense of achievement include:

(a) Careful adherence to suggested time limits. If each report is finished on time, there will be time in the session to relate new information to social change, and the session will finish on time. These achievements in turn lead to finishing topics as expected, creating an ongoing sense of momentum and achievement. If reports are repeatedly too long, sessions will run overtime, the group may get behind schedule, etc., and a sense of failure can easily set in.

(b) Sensitivity in judging how much time is worth allotting to completely open-ended discussion. Participants in many groups have found it frustrating and unproductive to discuss at length points for which documenting information is not at hand. Similarly, it can be very unsatisfying to get off on tangents and not end up where you wanted to be.

(c) Being careful to allow significant amounts of time for relating what's learned to what can be done with it. This may seem unimportant if action ideas generated aren't acted on immediately, but is in fact valuable for two reasons. First, participants will usually take these ideas back into their own lives, and into other groups they're involved in, e.g., ecology, peace, social justice. Second, generating ideas for social change activities (and reviewing them periodically) reminds the group of all the things that could be done. This is an important counter-balance to the disturbing and discouraging nature of some of the information the reports bring to light. Reviewing the action ideas generated over the course of the study group also reminds the group how much it has accomplished.

(d) Sensitivity in making efficient use of overall session time, but not overburdening the group. Work toward finding your group's balance between the amount of information input and discussion that feels positive and exciting, and the amount that feels too intense and overwhelming.

4. *Doing enjoyable, energizing things to help keep the group's morale and energy level high is very important.* Precisely because social change study groups have a very serious purpose, we need

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energy from many sources. One is the attainment and appreciation of solid achievement described above. Others (in addition to excitement sharing) are singing, stretches, and active games that can be inserted at low-energy points in a session.⁴ These raise our energy level for more creative work, release tension, and help us to start implementing now a vision of a society in which people enjoy each other through both work and play.

5. *Regular carrying out of effective evaluations.* This principle is placed at the end of the group process section because in some ways it encompasses all the previous principles. An evaluation that is both frank and honest, and at the same time sensitive and supportive of participants, is a crucial mechanism for sharing everyone's assessment of how well things are going in terms of the principles outlined above, and for making use of the collective wisdom of the group in making improvements for the future. It is the major opportunity to implement the process of molding the study group structure to meet the group's particular needs; and to strengthen group morale and increase energy by reflecting on things that went well.

B. Topics and Readings

6. *Maintenance of the overall framework of the topics studied.* This is important because the study of a set of topics which have been arranged to create an intellectual framework helps people build a sense of things falling into place which the study of a random series of topics usually doesn't produce. This excitement helps maintain a high level of enthusiasm about the study group. A group that feels a need to change the order of, add, or delete topics should try to gauge the probable effect of the change on the coherence of the learning experience.

7. *Any new topics added are relevant to action.* Action for social change is, of course, the major purpose of social change study groups. Any new topics about which members of the group may be curious should be assessed according to how their study might strengthen efforts for social change.

8. *An emphasis on readings, both those prescribed in this book and any new ones added by groups, that go to the roots of problems.* "Going to the roots of a problem" means raising questions about what is really necessary to solve the problem, and not stopping short of that because of vested interests which would be threatened if a true resolution of the problem were approached. Many of the readings prescribed in this book advocate fundamental change in political and economic policies. This emphasis has been chosen for two reasons. First, these viewpoints favoring fundamental change are ones which are rarely familiar or accurately known, whereas we are all constantly immersed, via the mass media (including the prestigious newspapers and magazines), in various shorter-range reform arguments as well as arguments denying that the things we study are problems at all. Second, often the case for fundamental change is a sound one, with which peace activists should therefore become familiar. Participants may also choose, however, to include addi-

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tional readings defending the status quo or advocating minimal reforms so that the different perspectives can be examined side by side.

9. Any *new readings* a group may introduce *should include one or more of the following: new knowledge; proposed values or guidelines with which to approach the subject; insights into links between ostensibly different topics; proposals for solutions; and ideas about strategy for making the solutions happen.*

C. Action

10. *A small group of people, such as the participants in a peace system study group, can undertake meaningful and successful political action toward solving the problems they are studying.* The sit-in movement, started in 1960 by four black college students determined to end lunch-counter segregation, is one dramatic example, but innumerable others could be given.⁵

11. *The success of a social change study group should be evaluated primarily on the basis of its influence on our actions for social change.* As suggested earlier, this can take several forms besides that of the study group members' deciding to do an action project together. These can include the introduction of new ideas to other social change groups, the spreading of more effective and enjoyable ways of conducting meetings, and organizing new study groups, among other possibilities.

12. *We are all victims of the problems we are studying,* not just altruistic reformers working on someone else's problems. This should be kept in mind as we consider how to confront various aspects of the world's problems and work toward solutions. Reflection and discussion should show that these problems affect us personally and are not just abstract subjects. The better we understand that, and look upon our social change efforts as steps toward improving the quality of our own lives, the more strength we will have to draw on in the struggle.